





Curriculum Progress Plan Computer





	HALF TERM 1	HALF TERM2	HALF TERM3	HALF TERM 4	HALF TERM 5	HALF TERM 6
Topic Titles	Hardware	Software	Logic	Programming	Programming Project	Social, Ethical & Legal Considerations
	Components of a computer Internal components Peripherals	Operating systems Application software Utility software	Binary numbers Logic gates Sequencing instructions	Planning & Design Variables Input & Output Sequencing Selection Iteration Arithmetic & Logic OperationsComments Testing & Evaluation	Planning & Design Variables Input & Output Sequencing Selection Iteration Arithmetic & Logic OperationsComments Testing & Evaluation	Social Considerations Ethical Considerations Legal Considerations
Stage 5 GCSE 7-9	To define a computer system To list examples of systems To describe the importance of computer systems in the modern world To be able to explain the need for reliability in computer systems To be able to explain the standards in computer systems To be able to explain the importance of ethical and legal considerations when creating computer systems To be able to explain the importance of environmental considerations when creating computer systems To respond to feedback on assessment To be able to describe input and output devices for a wide range of computer controlled situations	Students will demonstrate a mastery of having a good knowledge and understanding of Operating systems Application software and Utility software. Students will demonstrate that they can effectively use and develop Operating systems, Application software and Utility software	To be able to explain why data is represented in computer systems in binary form To understand and produce simple logic diagrams using the operations NOT, AND and OR To produce a truth table from a given logic diagram To define the terms bit, nibble, byte, kilobyte, megabyte, gigabyte, terabyte To understand that data needs to be converted into a binary format to be processed by a computer. To be able to convert positive denary whole numbers (0-255) into 8-bit binary numbers and vice versa To be able to convert positive denary which may occur To be able to convert positive denary whole numbers (0-255) into 2-digit hexadecimal numbers and vice versa To be able to convert bositive denary whole numbers (0-255) into 2-digit hexadecimal numbers and vice versa and be xadecimal equivalents of the same number	Introduction to Python Numbers and Arithmetic Selection Writing algorithms Assessment – Test a program Fix-it-Five While loops Searching Lists Procedures	Game analysis Sprites and objects Enemies and collision detection Firing projectiles Capturing the flag Testing and assessment Fix-it-Five	Students will demonstrate a mstery of how to •learn which information they should avoid sharing online because it is private. •understand which kinds of websites have privacy policies, and why. •practice checking websites they visit for privacy policies and privacy seals of approvals Students will be able to •reflect on what it means to be brave and stand up for others offline and online. •learn to show empathy for those who have been cyberbullied. •generate multiple solutions for helping others when cyberbullying occurs. Students will be able to •learn that they have a digital footprint and that information from it can be searched; copied and passed on; seen by a large, invisible audience, and can be persistent. •recognize that people's online information can be helpful or harmful

Stage 4 GCSE 5-6	To define a computer system To list examples of systems To describe the importance of computer systems in the modern world To be able to explain the need for reliability in computer systems To be able to explain the standards in computer systems To be able to explain the importance of ethical and legal considerations when creating computer systems To be able to explain the importance of environmental considerations when creating computer systems To respond to feedback on assessment To be able to describe input and output devices for a wide range of computer controlled situations	Students will demonstrate a mastery of having a good knowledge and understanding of Operating systems Application software and Utility software. Students will demonstrate that they can effectively use and develop Operating systems, Application software and Utility software	To be able to explain why data is represented in computer systems in binary form To understand and produce simple logic diagrams using the operations NOT, AND and OR To produce a truth table from a given logic diagram To produce a truth table from a given logic diagram of define the terms bit, nibble, byte, kilobyte, megabyte, gigabyte, terabyte To understand that data needs to be converted into a binary format to be processed by a computer. To be able to convert positive denary whole numbers (0-255) into 8-bit binary numbers and vice versa To be able to convert positive denary whole numbers (0-255) into 2-digit hexadecimal numbers and vice versa To be able to convert positive denary whole numbers (0-255) into 2-digit hexadecimal numbers and vice versa To be able to convert between binary and hexadecimal equivalents of the same number	Introduction to Python Numbers and Arithmetic Selection Writing algorithms Assessment – Test a program Fix-it-Five While loops Searching Lists Procedures	Game analysis Sprites and objects Enemies and collision detection Firing projectiles Capturing the flag Testing and assessment Fix-it-Five	Students will demonstrate a mstery of how to • learn which information they should avoid sharing online because it is private. • understand which kinds of websites have privacy policies, and why. • practice checking websites they visit for privacy policies and privacy seals of approvals Students will be able to • reflect on what it means to be brave and stand up for others offline and online. • learn to show empathy for those who have been cyberbullied. • generate multiple solutions for helping others when cyberbullying occurs. Students will be able to • learn that they have a digital footprint and that information from it can be searched; copied and passed on; seen by a large, invisible audience, and can be persistent. • recognize that people's online information can be helpful or harmful
Stage 3	 To understand the function and 	To be able to define the term	To simply explain what is meant by	To develop an understanding and use	 To simply give detailed information 	Students will start to be able to
GCSE 3-4	purpose of a computer	'software'	binary data and to understand why a	various computing pltaforms	about the final product to be produced.	 learn which information they should
	 To understand that not every 	 To understand that software 	computer uses binary data	including:	•To contribute effectively to the work of	avoid sharing online because it is
	computer looks like a PC and that	provides instructions for the	•To be able to identify the first	Variable Swap	a group most of the time, to produce	private.
	many everyday devices contain	computer	electronic computer	Codio	detailed planning documents e.g. mind	•understand which kinds of websites
	computers	• To be able to identify different types	•To gain a basic understanding of the	Scratch	map, brainstorm, thought-shower,	have privacy policies, and why.
	•	of software	role of Colossus in World War II	Python	showing the allocation of tasks.	practice checking websites they visit
	• To be able to Identify the main	Io be able to distinguish between	lo gain a basic understanding of	To offectively learn planning &	Io list a range of appropriate success	for privacy policies and privacy seals
	To be able to explain the role of the	system software and application	now colossus made use of valves,	Dosign Variables Input & Output	edescribe the main features of three	of approvals Students will be able to
	• To be able to explain the role of the	soltware	To explain the purpose and use of a	Sequencing Selection Iteration	different types of search engine giving	•reflect on what it means to be brave
			transistor in computing terms	Arithmetic & Logic Operations	at least one example of each	and stand up for others offline and
	-		•To understand that computers are	Comments Testing & Evaluation	•explain the appropriate use of at least	online
			getting faster all the time (Moore's		three techniques when using search	elearn to show empathy for those
			Law)		engines.	who have been cyberbullied.
			To define the terms bit, nibble, byte,		• compare the results of searches using	•generate multiple solutions for
			kilobyte, megabyte, gigabyte,		these techniques in three different	helping others when cyberbullying
			terabyte		types of search engine	occurs.
			To understand that data needs to be		 identify a range of information 	Students will be able to
			converted into a binary format to be		required.	 learn that they have a digital
			processed by a computer.		 carry out research using the internet 	footprint and that information from it
			To be able to explain why data is		and at least two non-internet sources.	can be searched; copied and passed
			represented in computer systems in		•use effective internet search criteria.	on; seen by a large, invisible
			binary form		•list sources and evaluate the suitability	audience, and can be persistent.
			Represent text as binary such as		and reliability of most of them.	•recognize that people's online
			writing names in binary or decoding		• comment on the copyright of most of	Information can be helpful or harmful
			secret messages		the information found.	to their reputation and image.

Stage 2	•To develop an understanding of the	To develop an understanding of how	To explain what is meant by binary	To effectively understand and use	•Give detailed information about the	Students will be able to
GCSE 1-2	function and purpose of a computer	to be able to define the term	data and to understand why a	various computing pltaforms	final product to be produced.	 learn which information they should
	•To understand that not every	'software'	computer uses binary data	including:	•To contribute effectively to the work of	avoid sharing online because it is
	computer looks like a PC and that	•To understand that software	•To be able to identify the first	Variable Swap	a group most of the time, to produce	private.
	many everyday devices contain	provides instructions for the	electronic computer	Codio	detailed planning documents e.g. mind	• •understand which kinds of websites
	computers	computer	•To gain a basic understanding of the	Scratch	map, brainstorm, thought-shower,	have privacy policies, and why.
	•	•To be able to identify different types	role of Colossus in World War II	Python	showing the allocation of tasks.	 practice checking websites they visit
	•To be able to identify the main	of software	• To gain a basic understanding of	.,	•To list a range of appropriate success	for privacy policies and privacy seals
	component parts of a computer	•To be able to distinguish between	how Colossus made use of valves.	To effectively learn Planning &	criteria will be given.	of approvals
	•To be able to explain the role of the	system software and application	rewiring and paper tape	Design Variables Input & Output	•describe the main features of three	Students will be able to
	main components within a computer	software	•To explain the purpose and use of a	Sequencing Selection Iteration	different types of search engine giving	•reflect on what it means to be brave
	•		transistor in computing terms	Arithmetic & Logic Operations	at least one example of each	and stand up for others offline and
			•To understand that computers are	Comments Testing & Evaluation	•explain the appropriate use of at least	online
			getting faster all the time (Moore's		three techniques when using search	elearn to show empathy for those
			law)		engines	who have been cyberbullied
			To define the terms bit nibble byte		•compare the results of searches using	•generate multiple solutions for
			kilobyte megabyte gigabyte		these techniques in three different	helping others when cyberbullying
			terabyte		types of search engine	
			To understand that data needs to be		•identify a range of information	Students will be able to
			converted into a binary format to be		required	elearn that they have a digital
			processed by a computer		•carry out research using the internet	footprint and that information from it
			To be able to explain why data is		and at least two non-internet sources	can be searched: conied and passed
			represented in computer systems in		euse effective internet search criteria	on: seen by a large invisible
			hinary form		elist sources and evaluate the suitability	audience, and can be persistent
			Represent text as hippry such as		and reliability of most of them	erecognize that people's online
			writing names in binary or decoding		comment on the convright of most of	information can be beloful or barmful
			secret messages		the information found	to their reputation and image
			Jecret messages		the mornation round.	to their reputation and image.
Change 1	Functional contractions of	Fue and in a sum damata a dia a afe	Fue evalues understanding of	Fue evaluation and evaluation of the	Fuendation condensation of	Encoursing the douston ding of
Stage 1	Emerging understanding of:	Emerging understanding of:	Emerging understanding of:	Emerging understanding of:	Emerging understanding of:	Emerging understanding of:
Stage 1 Entry Level	Emerging understanding of:	Emerging understanding of: To be able to define the term	Emerging understanding of: To explain what is meant by binary	Emerging understanding of: To effectively understand and use	Emerging understanding of: •Give detailed information about the	Emerging understanding of: Students will be able to
Stage 1 Entry Level	Emerging understanding of: To understand the function and	Emerging understanding of: To be able to define the term 'software'	Emerging understanding of: To explain what is meant by binary data and to understand why a computer user binary data	Emerging understanding of: To effectively understand and use various computing pltaforms	Emerging understanding of: • Give detailed information about the final product to be produced. • To contribute affectively to the work of	Emerging understanding of: Students will be able to •learn which information they should word charing online because it is
Stage 1 Entry Level	Emerging understanding of: To understand the function and purpose of a computer	Emerging understanding of: To be able to define the term 'software' •To understand that software provides istructions for the	Emerging understanding of: To explain what is meant by binary data and to understand why a computer uses binary data To bo able to identify the first	Emerging understanding of: To effectively understand and use various computing pltaforms including: Variable Supp	Emerging understanding of: • Give detailed information about the final product to be produced. • To contribute effectively to the work of a group most of the time to produce	Emerging understanding of: Students will be able to •learn which information they should avoid sharing online because it is private
Stage 1 Entry Level	Emerging understanding of: To understand the function and purpose of a computer •To understand that not every computer looks like a DC and that	Emerging understanding of: To be able to define the term 'software' •To understand that software provides instructions for the	Emerging understanding of: To explain what is meant by binary data and to understand why a computer uses binary data •To be able to identify the first electronic computer	Emerging understanding of: To effectively understand and use various computing pltaforms including: Variable Swap Codio	Emerging understanding of: •Give detailed information about the final product to be produced. •To contribute effectively to the work of a group most of the time, to produce detailed planing decumpate or a mind	Emerging understanding of: Students will be able to • learn which information they should avoid sharing online because it is private.
Stage 1 Entry Level	Emerging understanding of: To understand the function and purpose of a computer •To understand that not every computer looks like a PC and that	Emerging understanding of: To be able to define the term 'software' • To understand that software provides instructions for the computer To be able to identify different types	Emerging understanding of: To explain what is meant by binary data and to understand why a computer uses binary data •To be able to identify the first electronic computer	Emerging understanding of: To effectively understand and use various computing pltaforms including: Variable Swap Codio Scratch	Emerging understanding of: •Give detailed information about the final product to be produced. •To contribute effectively to the work of a group most of the time, to produce detailed planning documents e.g. mind	Emerging understanding of: Students will be able to •learn which information they should avoid sharing online because it is private. •understand which kinds of websites beau articipation and why
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Stage 1 Entry Level	Emerging understanding of: To understand the function and purpose of a computer • To understand that not every computer looks like a PC and that many everyday devices contain computers • • To be able to identify the main component parts of a computer • To be able to explain the role of the main components within a computer •	Emerging understanding of: To be able to define the term 'software' •To understand that software provides instructions for the computer •To be able to identify different types of software •To be able to distinguish between system software and application software	Emerging understanding of: To explain what is meant by binary data and to understand why a computer uses binary data • To be able to identify the first electronic computer • To gain a basic understanding of the role of Colossus in World War II • To gain a basic understanding of how Colossus made use of valves, rewiring and paper tape • To explain the purpose and use of a transistor in computing terms • To understand that computers are getting faster all the time (Moore's Law)	Emerging understanding of: To effectively understand and use various computing pltaforms including: Variable Swap Codio Scratch Python To effectively learn Planning & Design, Variables, Input & Output Sequencing, Selection, Iteration, Arithmetic & Logic, Operations, Comments, Testing & Evaluation	Emerging understanding of: • Give detailed information about the final product to be produced. • To contribute effectively to the work of a group most of the time, to produce detailed planning documents e.g. mind map, brainstorm, thought-shower, showing the allocation of tasks. • To list a range of appropriate success criteria will be given. • describe the main features of three different types of search engine, giving at least one example of each. • explain the appropriate use of at least three techniques when using search engines.	Emerging understanding of: Students will be able to elearn which information they should avoid sharing online because it is private. • understand which kinds of websites have privacy policies, and why. • practice checking websites they visit for privacy policies and privacy seals of approvals Students will be able to • reflect on what it means to be brave and stand up for others offline and online. • learn to show empathy for those who have been cyberbullied.
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Stage 1 Entry Level	Emerging understanding of: To understand the function and purpose of a computer • To understand that not every computer looks like a PC and that many everyday devices contain computers • • To be able to identify the main component parts of a computer • To be able to explain the role of the main components within a computer •	Emerging understanding of: To be able to define the term 'software' •To understand that software provides instructions for the computer •To be able to identify different types of software •To be able to distinguish between system software and application software	Emerging understanding of: To explain what is meant by binary data and to understand why a computer uses binary data •To be able to identify the first electronic computer •To gain a basic understanding of the role of Colossus in World War II •To gain a basic understanding of how Colossus made use of valves, rewiring and paper tape •To explain the purpose and use of a transistor in computing terms •To understand that computers are getting faster all the time (Moore's Law) To define the terms bit, nibble, byte, kilobyte, megabyte, gigabyte, terabyte	Emerging understanding of: To effectively understand and use various computing pltaforms including: Variable Swap Codio Scratch Python To effectively learn Planning & Design, Variables, Input & Output Sequencing, Selection, Iteration, Arithmetic & Logic, Operations, Comments, Testing & Evaluation	Emerging understanding of: • Give detailed information about the final product to be produced. • To contribute effectively to the work of a group most of the time, to produce detailed planning documents e.g. mind map, brainstorm, thought-shower, showing the allocation of tasks. • To list a range of appropriate success criteria will be given. • describe the main features of three different types of search engine, giving at least one example of each. • explain the appropriate use of at least three techniques when using search engines. • compare the results of searches using these techniques in three different types of search engine.	Emerging understanding of: Students will be able to elearn which information they should avoid sharing online because it is private. • understand which kinds of websites have privacy policies, and why. • practice checking websites they visit for privacy policies and privacy seals of approvals Students will be able to • reflect on what it means to be brave and stand up for others offline and online. • learn to show empathy for those who have been cyberbullied. • generate multiple solutions for helping others when cyberbullying hercure
Stage 1 Entry Level	Emerging understanding of: To understand the function and purpose of a computer • To understand that not every computer looks like a PC and that many everyday devices contain computers • • To be able to identify the main component parts of a computer • To be able to explain the role of the main components within a computer •	Emerging understanding of: To be able to define the term 'software' •To understand that software provides instructions for the computer •To be able to identify different types of software •To be able to distinguish between system software and application software	Emerging understanding of: To explain what is meant by binary data and to understand why a computer uses binary data •To be able to identify the first electronic computer •To gain a basic understanding of the role of Colossus in World War II •To gain a basic understanding of how Colossus made use of valves, rewiring and paper tape •To explain the purpose and use of a transistor in computing terms •To understand that computers are getting faster all the time (Moore's Law) To define the terms bit, nibble, byte, kilobyte, megabyte, gigabyte, terabyte	Emerging understanding of: To effectively understand and use various computing pltaforms including: Variable Swap Codio Scratch Python To effectively learn Planning & Design, Variables, Input & Output Sequencing, Selection, Iteration, Arithmetic & Logic, Operations, Comments, Testing & Evaluation	Emerging understanding of: • Give detailed information about the final product to be produced. • To contribute effectively to the work of a group most of the time, to produce detailed planning documents e.g. mind map, brainstorm, thought-shower, showing the allocation of tasks. • To list a range of appropriate success criteria will be given. • describe the main features of three different types of search engine, giving at least one example of each. • explain the appropriate use of at least three techniques when using search engines. • compare the results of searches using these techniques in three different types of search engine	Emerging understanding of: Students will be able to •learn which information they should avoid sharing online because it is private. •understand which kinds of websites have privacy policies, and why. •practice checking websites they visit for privacy policies and privacy seals of approvals Students will be able to •reflect on what it means to be brave and stand up for others offline and online. •learn to show empathy for those who have been cyberbullied. •generate multiple solutions for helping others when cyberbullying occurs.
Stage 1 Entry Level	Emerging understanding of: To understand the function and purpose of a computer • To understand that not every computer looks like a PC and that many everyday devices contain computers • • To be able to identify the main component parts of a computer • To be able to explain the role of the main components within a computer •	Emerging understanding of: To be able to define the term 'software' •To understand that software provides instructions for the computer •To be able to identify different types of software •To be able to distinguish between system software and application software	Emerging understanding of: To explain what is meant by binary data and to understand why a computer uses binary data •To be able to identify the first electronic computer •To gain a basic understanding of the role of Colossus in World War II •To gain a basic understanding of how Colossus made use of valves, rewiring and paper tape •To explain the purpose and use of a transistor in computing terms •To understand that computers are getting faster all the time (Moore's Law) To define the terms bit, nibble, byte, kilobyte, megabyte, gigabyte, terabyte To understand that data needs to be converted into a binary format to be	Emerging understanding of: To effectively understand and use various computing pltaforms including: Variable Swap Codio Scratch Python To effectively learn Planning & Design, Variables, Input & Output Sequencing, Selection, Iteration, Arithmetic & Logic, Operations, Comments, Testing & Evaluation	Emerging understanding of: • Give detailed information about the final product to be produced. • To contribute effectively to the work of a group most of the time, to produce detailed planning documents e.g. mind map, brainstorm, thought-shower, showing the allocation of tasks. • To list a range of appropriate success criteria will be given. • describe the main features of three different types of search engine, giving at least one example of each. • explain the appropriate use of at least three techniques when using search engines. • compare the results of searches using these techniques in three different types of search engine • identify a range of information required	Emerging understanding of: Students will be able to •learn which information they should avoid sharing online because it is private. •understand which kinds of websites have privacy policies, and why. •practice checking websites they visit for privacy policies and privacy seals of approvals Students will be able to •reflect on what it means to be brave and stand up for others offline and online. •learn to show empathy for those who have been cyberbullied. •generate multiple solutions for helping others when cyberbullying occurs. Students will be able to
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Stage 1 Entry Level	Emerging understanding of: To understand the function and purpose of a computer • To understand that not every computer looks like a PC and that many everyday devices contain computers • • To be able to identify the main component parts of a computer • To be able to explain the role of the main components within a computer •	Emerging understanding of: To be able to define the term 'software' •To understand that software provides instructions for the computer •To be able to identify different types of software •To be able to distinguish between system software and application software	Emerging understanding of: To explain what is meant by binary data and to understand why a computer uses binary data •To be able to identify the first electronic computer •To gain a basic understanding of the role of Colossus in World War II •To gain a basic understanding of how Colossus made use of valves, rewiring and paper tape •To explain the purpose and use of a transistor in computing terms •To understand that computers are getting faster all the time (Moore's Law) To define the terms bit, nibble, byte, kilobyte, megabyte, gigabyte, terabyte To understand that data needs to be converted into a binary format to be processed by a computer. To be able to explain why data is represented in computer systems in binary form Represent text as binary such as	Emerging understanding of: To effectively understand and use various computing pltaforms including: Variable Swap Codio Scratch Python To effectively learn Planning & Design, Variables, Input & Output Sequencing, Selection, Iteration, Arithmetic & Logic, Operations, Comments, Testing & Evaluation	Emerging understanding of: • Give detailed information about the final product to be produced. • To contribute effectively to the work of a group most of the time, to produce detailed planning documents e.g. mind map, brainstorm, thought-shower, showing the allocation of tasks. • To list a range of appropriate success criteria will be given. • describe the main features of three different types of search engine, giving at least one example of each. • explain the appropriate use of at least three techniques when using search engines. • compare the results of searches using these techniques in three different types of search engine • identify a range of information required. • carry out research using the internet and at least two non-internet sources. • use effective internet search criteria. • list sources and evaluate the suitability and reliability of most of them.	Emerging understanding of: Students will be able to •learn which information they should avoid sharing online because it is private. •understand which kinds of websites have privacy policies, and why. •practice checking websites they visit for privacy policies and privacy seals of approvals Students will be able to •reflect on what it means to be brave and stand up for others offline and online. •learn to show empathy for those who have been cyberbullied. •generate multiple solutions for helping others when cyberbullying occurs. Students will be able to •learn that they have a digital footprint and that information from it can be searched; copied and passed on; seen by a large, invisible audience, and can be persistent. •recognize that people's online