BLEAK HILL PRIMARY SCHOOL

Computing Long Term Plan 2024-2025

Bleak Hill Primary School
Computing Long Term Plan and Progression

Vision 	Intent 	Implementation 	Impact 
At Bleak Hill Primary School, we understand that Technology is changing the lives of everyone. Through teaching Computing, we equip children to participate in a rapidly changing world where work and leisure activities are increasingly transformed by technology. 'if we teach today as we taught yesterday, we rob our children of tomorrow' – John Dewey.	It is our intention to enable children to find, explore, analyse, exchange and present information. We also focus on developing the skills necessary for children to be able to use information in a discriminating and effective way. Computing skills are a major factor in enabling children to be confident, creative and independent learners and it is our intention that children have every opportunity available to allow them to achieve this.	Computing is taught in discrete lessons following the National Curriculum as a basis, with statutory content being taught using the Purple Mash scheme of work. There are many opportunities to embed these skills through other areas of the curriculum through cross-curricular activities. The children have access to hardware (laptops, iPad, and Beebots) throughout the week.	Retrieval based learning techniques for every lesson in the sequence. Evaluations for each lesson to provide formative assessment and to inform planning for future sessions.

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Computing Overview

Computing	Computer Science			Information Technology			Digital Literacy			
EYFS	In Reception, children will being to develop their technological understanding through a variety of planned and independent play based tasks. The EYFS aims for the children to develop the following: Recognise that a range of technology is used in places such as homes and schools. Select and use technology for particular purposes									
YEAR 1	**Unit 1.1** Online Safety and Exploring Purple Mash (4 weeks)	**Unit 1.2** Grouping and Sorting (2 weeks)	Unit 1.3 Pictograms (3 weeks)	**Unit 1.4** Lego Builders (3 weeks)	**Unit 1.5** Maze Explorers (3 weeks)	**Unit 1.6** Animated Story Books (5 weeks)	**Unit 1.7** Coding (6 weeks)	**Unit 1.9** Technology Outside School (2 weeks)		
YEAR 2	**Unit 2.2** Online Safety (3 weeks)	**Unit 2.1** Coding (5 weeks)	**Unit 2.3** Spreadsheets (4 weeks)	**Unit 2.4** Questioning (5 weeks)	**Unit 2.5** Effective Searching (3 weeks)	**Unit 2.6** Creating pictures (5 weeks)	**Unit 2.7** Making music (3 weeks)	**Unit 2.8** Presenting Ideas (5 weeks)		
YEAR 3	**Unit 3.2** Online Safety (3 weeks)	**Unit 3.1** Coding (6 weeks)	**Unit 3.3** Spreadsheets (3 weeks)	**Unit 3.4** Touch Typing (4 weeks)	**Unit 3.5** Email (inc. email safety) (6 weeks)	**Unit 3.6** Branching Databases (4 weeks)	**Unit 3.7** Simulations (3 weeks)	**Unit 3.8** Graphing (3 weeks)	Unit 3.9 Presenting using Microsoft PowerPoint (5/6 weeks)	**Unit 3.10** micro:bits (4 weeks)
YEAR 4	**Unit 4.2** Online Safety (4 weeks)	**Unit 4.1** Coding (6 weeks)	**Unit 4.4** Writing for Different Audiences (5 weeks)	**Unit 4.5** Logo (4 weeks)	**Unit 4.6** Animation (3 weeks)	**Unit 4.7** Effective Search (3 weeks)	**Unit 4.8** Hardware Investigators (2 weeks)	Unit 4.9 Making Music (4 weeks)	Unit 4.10 Artificial Intelligence (4weeks)	**Unit 4.11** micro:bits (4 weeks)
YEAR 5	**Unit 5.2** Online Safety (3 weeks)	**Unit 5.1** Coding (6 weeks)	**Unit 5.3** Spreadsheets (6 weeks)	**Unit 5.4** Databases (4 weeks)	**Unit 5.5** Game Creator (5 weeks)	**Unit 5.6** 3D Modelling (4 weeks)	**Unit 5.7** Concept Maps (4 weeks)	Unit 5.8 Word Processing using Microsoft Word (8 weeks)	**Unit 5.9** Using External Devices (6 weeks)	**Unit 5.10** micro:bits (4 weeks)
YEAR 6	**Unit 6.2** Online Safety (2 weeks)	**Unit 6.1** Coding (6 weeks)	**Unit 6.4** Blogging (4 weeks)	**Unit 6.5** Text adventures (5 weeks)	**Unit 6.6** Networks (3 weeks)	**Unit 6.7** Quizzing (6 weeks)	**Unit 6.8** Understanding Binary (4 weeks)	Unit 6.9 Spreadsheets using Microsoft Excel (8 weeks)	**Unit 6.10** micro:bits (4 weeks)	

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	Computer Science			Information Technology	Digital Literacy	
Year 1 National Curriculum Statements	Understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions	Create and debug simple programs.	Use logical reasoning to predict the behaviour of simple programs	Use technology purposefully to create, organise, store, manipulate and retrieve digital content.	Recognise common uses of information technology beyond school	Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies
Year 1 Purple Mash outcomes	Children understand that an algorithm is a set of instructions used to solve a problem or achieve an objective. They know that an algorithm written for a computer is called a program.	Children can work out what is wrong with a simple algorithm when the steps are out of order, e.g. The Wrong Sandwich in Purple Mash and can write their own simple algorithm, e.g. Colouring in a Bird activity. Children know that an unexpected outcome is due to the code they have created and can make logical attempts to fix the code, e.g. Bubbles activity in 2Code	When looking at a program, children can read code online at a time and make good attempts to envision the bigger picture of the overall effect of the program. Children can, for example, interpret where the turtle in 2Go challenges will end up at the end of the program.	Children are able to sort, collate, edit and store simple digital content e.g. children can name, save and retrieve their work and follow simple instructions to access online resources, use Purple Mash 2Quiz example (sorting shapes), 2Code design mode (manipulating backgrounds) or using pictogram software such as 2Count.	Children understand what is meant by technology and can identify a variety of examples both in and out of school. They can make a distinction between objects that use modern technology and those that do not e.g. a microwave vs. a chair	Children understand the importance of keeping information, such as their usernames and passwords, private and actively demonstrate this in lessons. Children take ownership of their work and save this in their own private space such as their My Work folder on Purple Mash

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Vocabulary	**Unit 1.2 - Grouping and Sorting** Sort, criteria, describe, more than, less than, equal groups, algorithm **Unit 1.4 - Lego Builders** instructions, algorithm, program, machine, computer, recipe, debugging, code, sequence	**Unit 1.3 - Pictograms** data, pictogram, visual, title, collect data, record results, compare, totals	**Unit 1.1 - Online Safety and Exploring Purple Mash** login, password, private, home screen, work area, avatar, icon, typing, saving, save, log out, alert, notification, communication, device, search, filter, shared folders, filename, Topic Area, writing template, textbox, toolbar, menu, think about box, Purple Mash Tools, button
	Unit 1.5 - Maze Explorers instructions, direction, forwards, backwards, left, right, keys, challenge, undo, rewind, route, delete, command, Unit algorithm, debug **Unit 1.7 – Coding** instructions, algorithm, code, programmer, coding, software, code blocks, object, action, 2Do, command, Design View, Code view, debug\ debugging, run, Event, click, sound, when clicked, output, Execute, background, scale, scene, properties, plan	**Unit 1.3 - Pictograms** data, pictogram, visual, title, collect data, record results, compare, totals	**Unit 1.1 - Online Safety and Exploring Purple Mash** login, password, private, home screen, work area, avatar, icon, typing, saving, save, log out, alert, notification, communication, device, search, filter, shared folders, filename, Topic Area, writing template, textbox, toolbar, menu, think about box, Purple Mash Tools, button
Curriculum Links	Maths	Maths	PSHE

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	Computer Science			Information Technology	Digital Literacy	
Year 2 NC Statements	Understand what algorithms are; how they are implemented as programs on digital devices; and those programs execute by following precise and unambiguous instructions.	Create and debug simple programs.	Use logical reasoning to predict the behaviour of simple programs.	Use technology purposefully to create, organize, store, manipulate and retrieve digital content.	Recognise common uses of information technology beyond school	Use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies
Year 2 PM outcomes	Children can explain that an algorithm is a set of instructions to complete a task. When designing simple programs, children show an awareness of the need to be precise with their algorithms so that they can be successfully converted into code	Children can create a simple program that achieves a specific purpose. They can also identify and correct some errors, e.g., Debug Challenges: Chimp. Children's program designs display a growing awareness of the need for logical, programmable steps.	Children can identify the parts of a program that respond to specific events and initiate specific actions. For example, they can write a cause-and-effect sentence of what will happen in a program.	Children demonstrate an ability to organise data using, for example, a database such as 2Investigate and can retrieve specific data for conducting simple searches. Children are able to edit more complex digital data such as music compositions within 2Sequence. Children are confident when	Children can effectively retrieve relevant, purposeful digital content using a search engine. They can apply their learning of effective searching beyond the classroom. They can share this knowledge, e.g. 2Publish example template. Children make links between technology they see around them, coding	Children know the implications of inappropriate online searches. Children begin to understand how things are shared electronically such as posting work to the Purple Mash display board. They develop an understanding of using email safely by using 2Respond activities on Purple Mash and know ways

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				creating, naming, saving and retrieving content. Children use a range of media in their digital content including photos, text and sound.	and multimedia work they do in school e.g. animations, interactive code and programs.	of reporting inappropriate behaviours and content to a trusted adult
Vocabulary	**Unit 2.1 - Coding** Instruction, algorithm, event, object, action, command, scene, background, properties, scale, click events, collision, detection, predict, Interaction, collision detection event, collision detection action, image, implement, Timer, interval, sequence, output, Properties, turtle, object, when key event, when swiped event, when clicked event, Button, object name, text, Bug, debugging, test			**Unit 2.3 - Spreadsheets** Spreadsheet, row, column, cell, delete, calculations, select, Button, data, image, move cell, Clipart, image value, Total, totaling tools, count tool, speak tool, data, data table, graph	**Unit 2.2 - Online Safety** search, filter, internet, sharing, display board, Email, attachment, reply, personal information, private information, digital footprint, protection, identifying, secure	
				Unit 2.4 - Questioning Pictogram, data, information, Sort, avatar, question, binary tree, database, record, field, search		
				Unit 2.6 - Creating Art, Impressionism, palette, style, Pointillism, dilute, Line, fill, vertical, horizontal, repeating pattern, parallel, diagonal, rotated, symmetry, Surrealism, e-collage, stamps, clip-art	**Unit 2.2 - Online Safety** search, filter, internet, sharing, display board, Email, attachment, reply, personal information, private information, digital footprint, protection, identifying, secure	

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		Unit 2.7 - Making Music Tune, compose, note, speed, beats, volume, Tempo, sound effect, repeat, bars, Soundtrack	
Curriculum Links		Art, Maths, Music, English	PHSE

	Computer Science				Information Technology		Digital Literacy
Year 3 **NC Statements**	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts	Use sequence, selection and repetition in programs; work with variables and various forms of input and output.	Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	Understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration.	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.	Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concern about content and contact.

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Year 3 PM outcomes	Children can turn a simple real-life situation into an algorithm for a program by deconstructing it into manageable parts. Their design shows that they are thinking of the desired task and how this translates into code. Children can identify an error within their program that prevents it following the desired algorithm and then fix it	Children demonstrate the ability to design and code a program that follows a simple sequence. They experiment with timers to achieve repetition effects in their programs. Children are beginning to understand the difference in the effect of using a timer command rather than a repeat command when creating repetition effects. Children understand how variables can be used to store information while a program is executing.	Children's designs for their programs show that they are thinking of the structure of a program in logical, achievable steps and absorbing some new knowledge of coding structures. For example, 'if' statements, repetition and variables. They make good attempts to 'step through' more complex code in order to identify errors in algorithms and can correct this. E.g. traffic light algorithm in 2Code. In programs such as Logo, they can 'read' programs	Children can list a range of ways that the internet can be used to provide different methods of communication. They can use some of these methods of communication, e.g. being able to open, respond to and attach files to emails using 2Email. They can describe appropriate email conventions when communicating in this way.	Children can carry out simple searches to retrieve digital content. They understand that to do this, they are connecting to the internet and using a search engine such as Purple Mash search or internet-wide search engines.	Children can collect, analyse, evaluate and present data and information using a selection of software, e.g. using a branching database (2Question), using software such as 2Graph. Children can consider what software is most appropriate for a given task. They can create purposeful content to attach to emails, e.g. 2Respond.	Children demonstrate the importance of having a secure password and not sharing this with anyone else. Furthermore, children can explain the negative implications of failure to keep passwords safe and secure. They understand the importance of staying safe and the importance of their conduct when using familiar communication tools such as 2Email in Purple Mash. They know more than one way to report unacceptable

			with several steps and predict the outcome accurately.				content and contact.
Vocabulary							
	Unit 3.1 – Coding Algorithm, background, Object, implement, predict, run, flowchart, properties, when clicked, when key, Timer, sequence, nested, Repeat, input, command, button, right-angle, degrees, Nesting, test, debug, Actions, object type, alert, Actions, object type, alert				**Unit 3.3 – Spreadsheets** pie chart, data, table, bar graph, advanced mode, cell address, Quiz tool, formula wizard, formula bar, spin tool (extension), equal tool, random number tool, spinner tool, timer tool, line graph, data, data table, budget, range **Unit 3.4 – Touch Typing** Posture, typing, keys, spacebar **Unit 3.6 – Branching** Data, database, branching database, binary tree, Debugging		**Unit 3.2 - Online Safety** password, personal information, blog. Permission, vlogs, appropriate, Internet, website, spoof, verify, reputable source, Inappropriate, Permission
	Unit 3.10 – micro:bits Hardware, LED, Repeat, Program, Software, Animation, image, infinite loop, output, sequence, Data, input, selection", Accelerometer, gestures, sound output, speaker				**Unit 3.7 - Simulations** simulation, modelling, advantages, disadvantages, point-of-view, solution, realistic, unrealistic, analysis, decision, evaluation **Unit 3.8 Graphing** graph, chart, title, sort, axis, data, row, column, investigation, tally chart, survey **Unit 3.9 - Presenting using Microsoft PowerPoint** textbox, presentation, font formatting, WordArt, media, slide, editing, audio,		**Unit 3.5 - Email (inc. email safety)** Communication, mind mapping, node, link, Email, compose, address book, inbox, trusted contact, personal information, password, save to draft, attachment, CC - carbon copy

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		video, animation, transition, preview, sound effect, duration, timing, review	BCC - blind carbon copy
Curriculum Links		Maths	PHSE

	Computer Science				Information Technology		Digital Literacy
Year 4 **NC Statements**	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	Use sequence, selection and repetition in programs; work with variables and various forms of input and output.	Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	Understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.	Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concern about content and contact.

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PM outcomes	When turning a real-life situation into an algorithm, the children's design shows that they are thinking of the required task and how to accomplish this in code using coding structures for selection and repetition. Children make more intuitive attempts to debug their own programs.	Children's use of timers to achieve repetition effects are becoming more logical and are integrated into their program designs. They understand 'if statements' for selection and attempt to combine these with other coding structures including variables to achieve the effects that they design in their programs. As well as understanding how variables can be used to store information while a program is executing, they are able to use and manipulate the value of variables.	Children's designs for their programs show that they are thinking of the structure of a program in logical, achievable steps and absorbing some new knowledge of coding structures. For example, 'if' statements, repetition and variables. They can trace code and use step-through methods to identify errors in code and make logical attempts to correct this. e.g. traffic light algorithm in 2Code. In programs such as Logo, they can 'read' programs with several steps	Children recognise the main component parts of hardware which allow computers to join and form a network. Their ability to understand the online safety implications associated with the ways the internet can be used to provide different methods of communication is improving.	Children understand the function, features and layout of a search engine. They can appraise selected webpages for credibility and information at a basic level.	Children are able to make improvements to digital solutions based on feedback. Children make informed software choices when presenting information and data. They create linked content using a range of software such as 2Connect and 2Publish+. Children share digital content within their community, i.e. using Virtual Display Boards.	Children can explore key concepts relating to online safety using concept mapping such as 2Connect. They can help others to understand the importance of online safety. Children know a range of ways of reporting inappropriate content and contact. Computing Progression N.C. Statements KS2 Year 4

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		Children can make use of user inputs and outputs such as 'print to screen'. e.g. 2Code.	and predict the outcome accurately.				
Vocabulary	**Unit 4.1 – Coding** background, button, object, properties, code block, predict, event, debugging, action, selection, if statement, decision, command, coordinate, flowchart, repeat until, if/else statement, inputs, execute, variable, number variable, alert, prompt				**Unit 4.4 - Writing for Different Audiences** Genre, format, font, Reporter, viewpoint, opinion, Reporter, viewpoint, opinion, Campaign		**Unit 4.2 - Online Safety** report, SMART rules, Spam. Attachment, phishing, digital footprint, malware, software, virus, AdFly, ransomware, cookies, plagiarism, watermark, citation, copyright, collaborating data analysis, collaborative database
	Unit 4.5 - Logo 2Logo, grid, run speed, Logo commands (e.g. FD BK RT LT), prediction, Pen up, Pen down, multi-line mode, debugging, Repeat, Procedure, SETPC, SETPS				**Unit 4.6 - Animation** animation, frame, fps (frames per second), pause, onion skinning, stop motion		
	Unit 4.8 - Hardware Investigators hardware, software, components, peripherals, motherboard, CPU, RAM, hard drive, graphics card, network card, monitor, mouse, keyboard, input, output				**Unit 4.7 - Effective Search** search engine, results page, Internet, key words, reliability, easter eggs, balanced view"		
	4.11- micro:bits Accelerometer, Data, Sensor, Variable, Infinite loop, Logic, Light sensor, Variable, Conditionals, Gestures, Selection, Simulation, Variable, Conditionals, Gestures, Selection, Simulation, Logic				**Unit 4.9 - Making Music** pulse, rhythm, tempo, pitch, texture, melody, dynamics, bpm, synth, harmonious"		
					Unit 4.10 - Artificial Intelligence Algorithm, Artificial Intelligence, Data		
Curriculum Links					music		PHSE

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	Computer Science				Information Technology		Digital Literacy
Year 5 NC Statements	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	Use sequence, selection and repetition in programs; work with variables and various forms of input and output.	Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	Understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration.	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.	Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concern about content and contact.
PM outcomes	Children may attempt to turn more complex real-life situations into algorithms for a program by deconstructing it into manageable	Children can translate algorithms that include sequence, selection and repetition into code with increasing ease and	When children code, they are beginning to think about their code structure in terms of the ability to debug and interpret the code	Children understand the value of computer networks but are also aware of the main dangers. They recognise what personal	Children search with greater complexity for digital content when using a search engine. They are able to explain in some	Children are able to make appropriate improvements to digital solutions based on feedback received and can confidently	Children have a secure knowledge of common online safety rules and can apply this by demonstrating the safe and respectful use of a few

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	parts. Children are able to test and debug their programs as they go and can use logical methods to identify the approximate cause of any bug but may need some support identifying the specific line of code	their own designs show that they are thinking of how to accomplish the set task in code utilising such structures. They are combining sequence, selection and repetition with other coding structures to achieve their algorithm design.	later, e.g. the use of tabs to organise code and the naming of variables.	information is and can explain how this can be kept safe. Children can select the most appropriate form of online communications contingent on audience and digital content, e.g. 2Blog, 2Email, Display Boards	detail how credible a webpage is and the information it contains.	comment on the success of the solution. e.g. creating their own program to meet a design brief using 2Code. They objectively review solutions from others. Children are able to collaboratively create content and solutions using digital features within software such as collaborative mode. They are able to use several ways of sharing digital content, i.e. 2Blog, Display Boards and 2Email	different technologies and online services. Children implicitly relate appropriate online behaviour to their right to personal privacy and mental wellbeing of themselves and others.
Vocabulary	**Unit 5.1 - Coding** Event, key press, collision, object, action, variable, selection, if/else statements, coordinates, simplify, efficient, computer-generated variable, Simulation, physical system, algorithm, properties, Decomposition, abstraction, Friction, function, predict, String, variables, values,				**Unit 5.3 - Spreadsheets** Converting values, imperial measures, metric measures, Perimeter, area, computational model, count tool, dice tool		**Unit 5.2 - Online Safety**

	tabs, text variable, collision, when key, random, output, Concatenation, print to screen, tabs, 'if' statement, 'if/else' statement	budget, profit, computational model, expenses, hypothesis, variables **Unit 5.4 – Databases** database, search, record, field, sort, group, arrange, statistics, reports, charts avatar, collaborative	responsibility, SMART rules, encrypt, critical thinking, image, manipulation, avatar, citation, validity, reliability,, plagiarism, bibliography, copyright, creative, commons licence, communication
	Unit 5.5 – Game evaluation, theme, scene, textures, images, screenshot, quest, instructions, feedback, promotion	**Unit 5.6 - 3D Modelling** Net, template, 3D view, pattern fill, Points, design brief, 3D Printing	
	Unit 5.10 - micro:bits accelerometer*, input*, LED*, Output*, Sensor*, Simulation*, Gestures, IF/THEN, Logic, Variable*Previous micro:bit units, Ambient temperature, Data, Thermometer, Thermostat, Selection, Input, Sensor, Simulation, Variable, Crocodile clip, Electrical circuit, Pins, Variable	**Unit 5.7 - Concept Maps** Concept, node, connections, story mode, heading, sub-heading, collaborate, presentation mode **Unit 5.8 - Word Processing using Microsoft** Word Processing Tool, document, front screen, zoom, selecting\highlighting, font, formatting, page orientation, copy and paste, copyright, creative commons, attributing, image editing, cropping, image, transparency, text wrapping, styles, bulleted list, numbered list, drop capital, text box, caption, hyperlink, WordArt, merge cells, column, row, distributing columns, grammar check, spell check, template, columns	
Curriculum Links		Maths	PHSE

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	Computer Science				Information Technology		Digital Literacy
Year 6 NC Statements	Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts.	Use sequence, selection and repetition in programs; work with variables and various forms of input and output.	se logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	Understand computer networks, including the internet; how they can provide multiple services, such as the World Wide Web, and the opportunities they offer for communication and collaboration.	Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information.	Use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concern about content and contact.
PM outcomes	Children are able to turn a more complex programming task into an algorithm by identifying the	Children translate algorithms that include sequence, selection and repetition into code and their	Children are able to interpret a program in parts and can make logical attempts to put the separate	Understand computer networks, including the internet; how they can provide multiple services,	Children readily apply filters when searching for digital content. They are able to explain in detail	Children make clear connections to the audience when designing and creating digital content.	Children demonstrate the safe and respectful use of a range of different technologies and

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	important aspects of the task (abstraction) and then decomposing them in a logical way using their knowledge of possible coding structures and applying skills from previous programs. Children test and debug their program as they go and use logical methods to identify the cause of bugs, demonstrating a systematic approach to try to identify a particular line of code causing a problem.	own designs show that they are thinking of how to accomplish the set task in code utilising such structures, including nesting structures within each other. Coding displays an improving understanding of variables in coding, outputs such as sound and movement, inputs from the user of the program such as button clicks and the value of functions.	parts of a complex algorithm together to explain the program as a whole.	such as the World Wide Web, and the opportunities they offer for communication and collaboration.	how credible a webpage is and the information it contains. They compare a range of digital content sources and are able to rate them in terms of content quality and accuracy. Children use critical thinking skills in everyday use of online communication.	The children design and create their own blogs to become a content creator on the internet, e.g. 2Blog. They are able to use criteria to evaluate the quality of digital solutions and are able to identify improvements, making some refinements.	online services. They identify more discreet inappropriate behaviours through developing critical thinking, e.g. 2Respond activities. They recognise the value in preserving their privacy when online for their own and other people's safety.
Vocabulary	**Unit 6.1 – Coding** algorithm, action, output, selection, variables, repeat, timer, launch, command, debug, alert, string, x and y properties, coordinates, decomposition, object, event, function, turtle object,				**Unit 6.4 – Blogging** blog, vlog, archive, blog post, collaborate, nodes, connections, commenting, approval		**Unit 6.2 - Online Safety**

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	text object, execute, function call, tabs, flowchart, simulation, procedure, input, concatenation text adventure		secure websites, location sharing, spoof, websites, phising, password, PEGI, digital footprint,, inappropriate print screen, screen time, data analysis
	Unit 6.5 - Text adventures text adventure, sprite, link, functions, selection, variables, repeat, step through, flow of control, functions, selection, variables, repeat, debugging, QR code	**Unit 6.7 – Quizzing** quiz, audience, copy\paste, selfie, undo\redo, audio, clipart, image filter, preview, case-sensitive, cloze, database, record, field, statistics, data, survey, participants, data, analysis	
	Unit 6.6 – Networks Internet, World Wide Web, website, network, web server, web page, hosting, data, LAN, WAN, WLAN, router, switch, hub, ethernet, Wi-Fi, search engine, ip address, ISP, DNS		
	Unit 6.8 - Understanding Binary input, decimal, binary, integer, denary, base 10, base 2, transistor, microprocessor, chip, nanotechnology, bit, nibble, byte, kilobyte, megabyte, gigabyte, tetrabyte, sequence, switch, remainder, same states, variable	**Unit 6.9 - Spreadsheets using Microsoft Excel** spreadsheet, cell, cell reference, data, column, row, workbook, sheet, categories ribbon, formula, formulae, calculation, formula, bar, series, computational model, template, budget, expense, formatting, currency, delimiter, sorting, flash fill, auto-fit, filter, average, minimum, maximum graph, chart, horizontal axis, vertical axis, conditional formatting, budget, profit	
	Unit 6.10 – micro:bits TBC		
Curriculum Links		Maths	PHSE