Hillcross Primary Computing Curriculum

KS1

Common themes taught in each year group

1. Computer Science
2. Communication Technology
3. Digital Literacy

	Year 1					
Topic	**Autumn 1: A change over time**	**Autumn 2: Carnival of the animals**	**Spring 1: End of the line**	**Spring 2: Very Victorian Values**	**Summer 1: Fe Fi Fo Fum**	**Summer 2: Whole school topic**
Computing concepts	Information Technology	Computer Science	Computer Science	Digital literacy	Information Technology	Information Technology Computer Science
Sub-strand	**Digital Art**	**Algorithms**	**Online safety**	**Media**	**Data**	**Algorithms**
Outcome	To move the curser on the screen using a mouse. To select an item on the screen by 'left clicking' on the mouse.	To use simple algorithms to program a **BeeBot** to move forward and backwards.	To add safe images and text to a **J2E presentation**.	Sign into Google and learn to navigate Google for education. (This will support children using Google classroom for home learning)	To **input data onto a table using Google sheets** and answer simple questions about the data.	To use simple algorithms to program a **Sprite** to move around.
NC knowledge and understanding	• Use technology purposefully to create, organise, store, manipulate and retrieve digital content	• Understand what algorithms are, how they are implemented as programs on digital devices, and 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 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.	• Using technology purposefully to create, organise, store, manipulate and retrieve digital data • Recognise common uses of information technology beyond school. • Use technology safely and respectfully, keeping personal information private	• Using technology purposefully to create, organise, store, manipulate and retrieve digital data. • Recognise common uses of information technology beyond school.	• Understand what algorithms are, how they are implemented as programs on digital devices, and programs execute by following precise and unambiguous instructions. • Create and debug simple programs • Use logical reasoning to predict the behaviour of simple programs • Recognise common uses of information technology beyond school.
Hillcross progression of skills	• Move the curser on the screen using a computer mouse. • Use 'left click' on the mouse to select brushes and colours • Use the undo function.	• Know an algorithm is a series of precise instructions. • To break down a process into simple, clear steps (an algorithm) • Program a BeeBot to move forwards and backwards • Create and debug simple	• To use technology safely and respectfully, knowing where to go for help and support if they have concern. • Choose appropriate titles and text in line with online safety. • Choose and import	• Signing into Google • Opening a Google document, sending a messaage and turing it in. • Opening Google Slides, adding text and images and turing it in.	• Use Google sheets • Explore a dataset and organise into groups and subgroups • To input a dataset and then filter to search for particular questions • How data can be structured as a tree	• Know an algorithm is a series of instructions. • To break down a process into simple, clear steps (an algorithm) • Create and debug simple programs. • Program a sprite to move

		programs.	appropriate images safely. • Understand how to protect their privacy Links to PSHE curriculum.		• How data can be organised into a table and can then be filtered and searched.	forwards and backwards. • Use repetition tool to move the sprite
Computing Vocabulary	Digital Undo Keyboard Mouse Screen Left click	Algorithm Bug Debug Input Output	Online safety Image Insert Text	Google Slides Username Password Online Safety	Database Dataset Field Filter Table Tree Cell	Repetition Sprite Algorithm Debug Input Output Program
Computing Capital (people, jobs)	Jason Naylor - digital artist	Grace Hopper - American computer scientist	Jarrett J Krosoczka - illustrator and online art teacher		Fei-fei Li - Chinese born, American computer scientist, leading AI researcher	Mitch Resnik - the creator of the Scratch programming language
Computing Resources (tools, software, hardware)	Microsoft Paint Paint 3D	Bee bots	ipads	Google Slides	Ipads	Scratch

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	Year 2					
Topic	**Autumn 1: London Landmarks**	**Autumn 2: Hearts and lanterns**	**Spring 1: Under the sea**	**Spring 2: Disaster strikes**	**Summer 1: A journey to discovery**	**Summer 2: Whole school topic**
Computing Concepts	Computer Science	Information Technology	Digital literacy	Information Technology	Information Technology	Computer Science
Sub strand	**Algorithms**	**Computational Thinking**	**Online safety**	**Media**	**Data**	**Algorithms**
Outcome	To **program a sprite in Scratch to move to a specific location** and interact with the user through the 'Say' function.	To view games and **work backwards to see the algorithms**. The focus is not to create a game but to see the impact of different algorithms.	To know how to **search safely** on the internet. To understand the basics of the **Google apps**.	To **take, edit and enhance photos** with an iPad.	To **create data in Google Sheets** using titles, axis and charts.	To **program a sprite in Scratch using repeat, forever loops and speech.**
NC knowledge and understanding	• Understand what algorithms are, how they are implemented as programs on digital devices, and programs execute by following precise and unambiguous instructions. • Create and debug simple programs • Use logical reasoning to predict the behaviour of simple programs	• Understand what algorithms are, how they are implemented as programs on digital devices, and programs execute by following precise and unambiguous instructions. • Use logical reasoning to predict the behaviour of simple programs • Recognise common uses of information technology beyond school.	• Use technology purposefully to create, organise, store, manipulate and retrieve digital data • 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.	Use technology purposefully to create, organise, store, manipulate and retrieve digital data Recognise common uses of information technology beyond school	Use technology purposefully to create, organise, store, manipulate and retrieve digital data Recognise common uses of information technology beyond school	• Understand what algorithms are, how they are implemented as programs on digital devices, and programs execute by following precise and unambiguous instructions. • Create and debug simple programs • Use logical reasoning to predict the behaviour of simple programs
Hillcross progression of skills	• Know an algorithm is a series of instructions. • To break down a process into simple, clear steps (an algorithm) • Create and debug simple programs. • Program a sprite to move forwards, backwards and turn. • Use repetition tool to move the sprite (not repeat loops) • Add messages in scratch.	• Observe and describe carefully what happens in computer games. • Use logical reasoning to decide the algorithm used in simple computer games. • Use logical reasoning to make predictions of what a program will do and test these. • Think critically about computer games	• Use Google slides • Develop research skills through searching safely for appropriate information on the internet. • Know what to do if you come across images or information which concerns you.	• Be able to consider the technical and artistic merits of photographs. • Use a camera app on an iPad. • To review and reject or pick the images they take. • Edit and enhance photos by cropping and changing the brightness and colour palette.	• Sort and classify a group of items by answering questions • Collect data using tick or tally charts. • Use Google sheets to produce basic charts to display the data.	• Plan a sequence of instructions to move sprites in scratch • Create, test and debug programs for sprites in scratch • Work with input and output in scratch • Use repeat loops conditional loops

Computing Vocabulary **Conceptual vocabulary in bold and underlined.**	Algorithm Code Sprite Bug Predict Input Output Repetition	Algorithm Code Sprite Bug Predict Input Output Repetition	World Wide Web Internet Research Text box Font Presentation Google	Copy and paste Pixel Image Tone/Contrast Crop Edit Manipulate	Binary Branching database Classification tree Data Database Tally chart table	Algorithm Code Sprite Bug Predict Input Output Repetition Conditional loop
Computing Capital (people, jobs)	Kautilya Katariya - currently the youngest computer programmer in the world (aged 6)	Nick Park - British animator, director and writer, and creator of Wallace and Gromit	Carolyn Bunting - CEO of internet matters and an internet safety expert	Annie Leibovitz - American portrait photographer	Codd. Edgar Frank "Ted" Codd - an English computer scientist who invented the relational model for database management.	Satoshi Tajiri - creator of Pokémon games
Computing Resources (tools, software, hardware)	Scratch	Scratch	Google Apps (Drive, Docs, Slides, Jam board)	iPad	Google Sheets	Scratch

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LKS2

	Year 3					
Topic	**Autumn 1: Supermarket sweep**	**Autumn 2: Rotten Romans**	**Spring 1: Settle down**	**Spring 2: Secret garden**	**Summer 1: Dig deep**	**Summer 2: Whole school topic**
Computing Concepts	Computer Science	Computer Science	Digital Literacy	Information Technology	Infrmation Technology	Digital Literacy
Sub strand	**Algorithms**	**Computational thinking**	**Networks**	**Media**	**Data**	**Media**
Outcome	Create a **simple animation** using Scratch, using the paint tool to create characters and backgrounds. Create an animation by translating ideas into instructions (a program) and then correcting any mistakes (debugging).	Working with example Scratch projects explain how the scripts work, **find and correct bugs** in them and explore ways of improving them. Learn to recognise **common types of programming error**, and practice solving problems through logical thinking.	To understand how **simple networks work**.	Create a mini **'Wikipedia'** using google slides. Possible links to science curriculum (Rocks & fossils) or history curriculum (Stonehenge)	Create an **opinion poll in Google forms**, seek responses and then analyse the data in Google sheets.	To use a **green screen** as a background, record a video and edit the background.
NC knowledge and understanding	• Design and write 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 • Detect and correct errors in algorithms and programs.	• Use logical reasoning to explain how some simple algorithms work and 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 technology safely, respectfully and responsibly; recognise acceptable and unacceptable behaviour; identify a range of ways to report concerns about content and contact.	• 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. • Select, use and combine a variety of software (including internet services) on a range of programs, system and content that accomplish given goals, including collecting, analysing and evaluating and presenting data and personal information. • Use technology safely, respectfully and responsibly; recognise acceptable and unacceptable behaviour; identify a range of ways to report concerns about content and contact.	• 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. • 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.	• 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 and unacceptable behaviour; identify a range of ways to report concerns about content and contact.

Hillcross progression of skills	• Create an algorithm for an animation from written instructions. • Write a program to create a game. • Create the background and manipulate a sprite. • Moving the sprite diagonally	• Develop several strategies for finding errors in programs. • Recognise several common types of bugs in software.	• Understand the physical hardware connections necessary for computer networks to work • Develop some knowledge of diagnostic tools for investigating network connections • Develop a basic understanding of how domain names are converted to IP addresses	• Understand the conventions for collaborative online work. • Become familiar with Wikipedia, including potential problems associated with its use. • Practise research skills. • Develop collaborative skills.	• Know how to design a simple survey in Google forms. • Create questions to collect the information required. • Use the web to facilitate data collection. • Use charts to analyse data and interpret results. • Move information between different applications.	• Develop web based research skills. • Record a piece to camera using an IPad • Use a green screen and create a setting. • Edit a video.
Computing Vocabulary **Conceptual vocabulary in bold and underlined.**	Predict Input Output Repetition Algorithm Diagonal	Bugs Debug Scripts	Computer network Internet Protocol Command Prompt Pinging	Website Wikipedia Intranet Internet World Wide Web (WWW)	Chart Data Graph Opinion Research Survey	Camera roll Creative commons Green screen
Computing Capital (people, jobs)	Shigeru Miyamoto - designer of racing game Mario Kart	Grace Murray Hopper - records 'the first computer bug' in the Harvard Mark II computer. The problem was traced to a moth in the computer.	Ada Lovelace - has been called "the first computer programmer" for writing an algorithm for a computing machine in the 1800's	Dana James Mwangi - owner of Cheers Creative, an award-winning website agency.	Nadhim Zahawi - an Iraqi-born British politician of Kurdish descent who founded YouGov	Lawrence Butler - inventor of the original green screen in the 1940s
Computing Resources (tools, software, hardware)	Scratch	Scratch	Search engine	Google Sites	Google Forms Google Sheets	iPad iMovie Green screen background

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LKS2

	Year 4					
Topic	**Autumn 1: Walk like an Egyptian**	**Autumn 2: Eurovision precision**	**Spring 1: Battle stations**	**Spring 2: Natural disasters**	**Summer 1: Playing cat and mouse**	**Summer 2: Whole school topic**
Computing Concepts	Computer Science	Computer Science	Information Technology	Information Technology	Digital Literacy	Computer Science
Sub strand	**Algorithms**	**Algorithms**	**Media**	**Data**	**Online safety and computational thinking**	**Algorithms**
Outcome	Design and program an **educational times table game** in scratch with a particular target audience in mind. Develop the game further to improve the user interface and functionality. Test the game and make any necessary changes.	To **develop a micro:bit** to turn a set of lights on and off.	Create a piece of **digital music** using a variety of programs. Use an editing program to make alterations to their final piece.	Create a quiz in Google Forms using factual questions	Create an internet safety app. Become aware of 'digital footprints' as well as what constitutes acceptable online behaviour	Use quadrants and turtle graphics to explore **geometric art**.
NC knowledge and understanding	• Design and write 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 • Detect and correct errors in algorithms and programs.	• Design and write 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 • Detect and correct errors in algorithms and programs.	• 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 sequence, selection, and repetition in programs, work with variables and various forms of input and output • 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.	• 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. • 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 technology safely, respectfully and responsibly; recognise acceptable and unacceptable behaviour; identify a range of ways to report concerns about content and contact. • 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.	• Design and write programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. • Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs. • Use sequence, selection, and repetition in programs, work with variables and various forms of input and output
Hillcross progression of skills	• Create an algorithm for a game from written instructions. • Write a program to create the game that will be	• Learn about the input-process-output model of computation • Learn about the inputs and outputs available on a BBC micro: bit and crumble	• Use several programs to create and edit music. • Develop an understanding of how audio files can be recorded, processed and exported using a	• Make a quiz using Google forms. • Create questions which Google 'marks' • Analysis data from the quiz	• Know what an app is. • Add images, sprites, sound and backgrounds • Add code and algorithms for a purpose.	• Draw shapes using algorithms. • Use the clone tool and repetition. • Change the colour,

	executed in sequence. • Write a program that will respond differently if the user gets a question right or wrong • Write a program that will ask several questions, so repetition is needed. • Write a program that uses a (score) variable	• Program using Make Code and Crumble block-based environment • Test and debug programs they write, using an onscreen simulator and the crumble • Convert and transfer a program written on screen to the micro bit and the crumble.	computer.	using tables, charts & graphs • Export information from Google form into excel or Google slides.	• Consider the effect you want the app to have.	background, size and texture of the shapes to create artwork.
Computing Vocabulary **Conceptual vocabulary in bold and underlined.**	Input Output Interface Repetition Variable Score Algorithm	Algorithm Micro: bit Crumble Object code Simulator Input output	Digital Composition Copyright Sample Sequencing Layers	Analogue Dataset Filter Google form Excel	Audience Dashboard Hyperlinks Plagiarism Copyright	Geometric Symmetry Tessellation Clone
Computing Capital (people, jobs)	Markus Persson - creator of 'Minecraft'	Lunokhod 1 - first robot on the moon	'Marshmallow' (Christopher Comstock) - American electronic music producer. 'I don't take my helmet off because I don't want or need fame. I'm genuinely trying to create something positive for people to connect with. ...		Admiral Robert FitzRoy - founder of the Met Office	Frieder Nake - a mathematician, computer scientist, and pioneer of computer art.
Computing Resources (tools, software, hardware)	Scratch	Micro: bits Microsoft Make Code Crumbles with cables and batteries Crumble software	iPads GarageBand	Google Form	Scratch	Scratch

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UKS2

	Year 5					
Topic	Autumn 1: We're the kids in America	Autumn 2: Third rock from the sun	Spring 1: It's all Greek to me	Spring 2: Oh I do Like to beside the seaside.	Summer 1: Marvellous Mayas	**Summer 2: Whole school topic**
Computing Concepts	Computer Science	Computer Science	Digital Literacy	Information Technology	Information Technology	Information Technology
Sub strand	**Algorithms**	**Computational thinking**	**Online safety**	**Media**	**Media**	**Media**
Outcome	Create a **chase game with a score and a timer** using Scratch, using the paint tool to create characters and backgrounds.	Learn about **communicating information securely** through an introduction to **cryptography**. Investigate early methods of communicating over distances, learn about early ciphers and consider what makes a secure password.	Work collaboratively to **create a website explaining e-safety** and responsible online behaviour. Use search technologies to become expert in researching effectively.	Using a **CAD tool** (SketchUp) to **create virtual 3D models** and spaces. Refine skills in using a search engine in selecting content from the 3D warehouse in SketchUp. Link to DT application.	To create an **interactive, multimedia adventure**	To create an **interactive, multimedia adventure**
NC knowledge and understanding	• Design and write 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 • Detect and correct errors in algorithms and programs.	• 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 technology safely, respectfully and responsibly; recognise acceptable and unacceptable behaviour; identify a range of ways to report concerns about content and contact.	• Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. • 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 technology safely, respectfully and responsibly; recognise acceptable and unacceptable behaviour; identify a range of ways to report concerns about content and contact.	• 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 • Select, use and combine a variety of software on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals.	• 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	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
Hillcross progression of skills	• Create original artwork. • Design and create a computer program for a computer game using sequence, selection,	• Know what encrypt and decrypt mean. • Understand the need for private information to be encrypted.	• Develop research skills to decide what information is appropriate. • Understand some elements of how search engines select and	• Develop familiarity with a simple CAD tool. • Develop spatial awareness by exploring and experimenting with a 3D virtual environment.	• Know how to plan a non-linear presentation • Create text as part of a presentation • Add and edit images in a	• Know how to link slides together in a presentation • Create buttons for readers to skip slides • Create dead-ends.

	repetition and variables. • Detect and correct errors in the game.	• Encrypt and decrypt messages in simple ciphers. • Appreciate the need to use complex passwords and to keep them secure. • Have some understanding of how encryption works on the web.	rank results. • Develop and refine ideas collaboratively. • Develop understanding of e-safety and responsible use of technology	• Develop greater aesthetic awareness.	presentation • Use hyperlinks for navigation between the slides of a presentation	
Computing Vocabulary **Conceptual vocabulary in bold and underlined.**	Algorithm Loops Obstacle Reset	Cipher Decrypt Encrypt Password Cryptography	Bias E-safety Page rank Webpage/website	e3D Virtual Architect Navigation	Loops Slides Input Output	Hyperlink Input Output System
Computing Capital (people, jobs)	Toru Iwatani - Japanese video game designer, best known for creating Pac-man	Alan Turing - codebreaker at Bletchley Park	Ayleigh Noele - 'web design for women in business'	Laura Jane Clark - architect for 'Your Home Made Perfect' (virtual reality makeover show) K	Warren Robinect- developed Atari game 'Adventure'	
Computing Resources (tools, software, hardware)	Scratch		Google Sites	Tinker Cad	Google Slides	Google Slides

Hillcross Primary Computing Curriculum

UKS2

	Year 6					
Topic	**Autumn 1: Everybody wants to rule the world**	**Autumn 2: A class act**	**Spring 1: War of the worlds**	**Spring 2: Peace at last**	**Summer 1: Game, set, match**	**Summer 2: Whole school topic**
Computing Concepts	Computer Science	Computer Science	Information Technology	Digital Literacy	Information Technology	INformation Technology
Sub strand	**Algorithms**	**Algorithms**	**Media**	**Online Safety**	**Media**	**Media**
Outcome	To **design and develop a program in Scratch to make a prototype of an interactive toy.**	To develop an **understanding of some important algorithms** for searching, sorting and maths.	**To be able to use word processing skills.**	To develop **appropriate skills to navigate social media**.	To **work collaboratively** to help produce **digital content** (yearbook or magazine) using **desktop publishing tools**.	To **collaboratively create, film and edit my own** short movie using a green screen.
NC knowledge and understanding	● Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts ● Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems. ● Use sequence, selection and repetition in programs, work with various forms of input and output. ● Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in their programs.	● 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.	● 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 search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content.	● Understand the opportunities computer networks offer for communication and collaboration. ● Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content. ● Use technology safely, respectfully and responsibly; recognise acceptable and unacceptable behaviour; identify a range of ways to report concerns about content.	● Understand computer networks including the Internet 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 and unacceptable behaviour; identify a range of ways to report concerns about content.	● Use technology safely, respectfully and responsibly; recognise acceptable and unacceptable behaviour; identify a range of ways to report concerns about 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 sequence, selection and repetition in programs, work with variables and various forms of input and output. ● Use technology safely, respectfully and responsibly; recognise acceptable and unacceptable behaviour; identify a range of ways to report concerns about content.

Hillcross progression of s kills	• How computers use stored programs to connect input to output. • How to generate and evaluate designs in response to a brief. • To plan a complex project by decomposing it into smaller parts. • How to design and write a program for an embedded system.	• Develop the ability to reason logically about algorithms. • Understand how some key algorithms can be expressed as programs. • Understand that some algorithms are more efficient than others for problem solving. • Understand common algorithms for searching and sorting a list.	• Search quickly and effectively to get reliable information • Change fonts, margins, word check, word count, thesaurus, colours, page orientation in documents • Show similarities between slides and PowerPoint; Google docs and word and Google sheets and excel	• About appropriate rules / guidelines for online discussions. • How search results are selected and ranked. • How to argue their point effectively, supporting their views with sources. • How to counter someone else's argument while showing respect and tolerance. • How to judge the reliability of an online source. • Some strategies for dealing with online bullying.	• Input text boxes into Publisher • Input photos into Slides • Organising information using appropriate fonts and text sizes	• To edit a video • To add music to a video • To add multiple backgrounds onto a green screen footage
Computing Vocabulary **Conceptual vocabulary in bold and underlined.**	Decomposition Input Output MakeCode Micro:bit System	Algorithm Binary Search Decomposition Divide and Conquer Greedy algorithm Linear Search Random Search Selection Sort	Font Margin spell check Word count Page orientation	Fake News Hyperlink Neutral point of view Cyberbullying Plausible Reliable Social media Source	Desktop publishing eBook Folder Image Text Google slides/powerpoint	Storyboard Rushes Export Rough Cut Final Cut
Computing Capital (people, jobs)	In the spirit of the original BBC Microcomputer of the 80's; the micro: bit is designed to encourage a new generation to pursue a career in computing, electronics and software - rather than just being consumers of media	Computational thinking is a set of problem-solving methods that involve expressing problems and their solutions in a way that a computer could also do. Jeanette Wing envisioned CT to become an essential part of every child's education	Many jobs where word and publisher are used rather than Google Drive.	Social Media platforms: Websites and applications that enable users to create and share content or participate in social networking - Facebook, Twitter, Instagram, WhatsApp, TikTok, Blogs etc… Mark Zuckerberg co-founder of Facebook	Digital content creator - someone who is responsible for the creation of information to any digital medium. Buzzfeed, HubSpot, Reddit etc… Instagram, TikTok, Facebook, Blogs etc...	Video Sharing Platforms: YouTube is easily the leading platform for sharing video, with over 1 billion hours of content watched every day. Founded by 3 former PayPal employees: Chad Hurley, Steve Chen and Jawed Karim. Google now owns.
Computing Resources (tools, software, hardware)	Micro: bit	Scratch	Microsoft PowerPoint Word Publisher Excel		Book Creator.	Green screen iPads