



St Hubert's RC Primary School



Long-term plan: Computing (Cycle A)

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Owl Class	Computing systems and networks 1: Using a computer (EYFS) Continuous Provision: Keyboard, computer and mouse. Kitchen electricals in role-play.	Programming 1: Algorithms unplugged (Yr1) Continuous Provision: Toys with gears, levers, pulls, knobs and handles and interactive whiteboard.	Programming 2: Programming Bee-Bots (EYFS) Continuous Provision: Bee-Bot, Torch, alarm clock and microphone.	Creating media: Digital imagery (Yr1) Continuous Provision: Use of Camera's and Ipad's to take photographs.	Data handling: Introduction to data (Yr1) Continuous Provision: Weighing scales and clocks through maths area.	Skills showcase: Rocket to the moon (Yr1) Continuous Provision:
Prior knowledge	Turning on and off the computer and using a mouse.	Following simple instructions e.g., getting dressed.	Programming 1 Unplugged (Au2)	Taking pictures in continuous provision.	Introduction to data in maths.	Computing systems and networks 1: Using a computer (Au1)
Future knowledge	Computing systems and networks 1: What is a computer? (Yr1)	Programming 2: Bee-Bot (Yr1)	Programming 2: Bee-Bot (Yr1)	Stop motion – Option 1: Using tablets (Yr2)	Data Handling: International Space Station (Yr2)	Programming 2: MakeCode (Yr2)
Knowledge (new learning/key learning)	Recognising and identifying familiar letters and numbers on a keyboard. Developing basic mouse skills such as moving and clicking.	An algorithm is when instructions are put in an exact order. Decomposition means breaking a problem into manageable chunks, which is important in computing. Errors in an algorithm are called bugs and fixing these is called debugging.	To understand that it is important for instructions to be in the right order. To know that you can program a Bee-Bot with some simple commands. To understand that debugging means how to fix some simple programming errors.	Holding a camera or device still and considering angles and light are important to taking good pictures. Photographs can be edited, cropped and filtered. How to search safely for images online.	Charts and pictograms can be created using a computer. A branching database is a way of classifying a group of objects. Computers understand different types of input.	When we create something on a computer it can be more easily saved and shared than a paper version. Some of the simple graphic design features of a piece of online software. A spreadsheet is an electronic table for sorting data.

			To understand that an algorithm is a set of clear and precise instructions.			
Skills	To understand what a computer keyboard is and recognise letters and numbers. To click and drag a mouse. To log in and out of a computer. To know technology can be found all around school.	To recognising that some devices are input devices and others are output devices. To learn that decomposition means breaking a problem down into smaller parts. To use decomposition to solve unplugged challenges.	Have knowledge of sequences, instructions and algorithms in everyday play and when working on a computer. Use knowledge of arrows and direction when using a computer, programming a Bee-Bot in play or following instructions.	To learn how to explore and tinker with hardware to find out how it works. To take and edit photographs. To develop an understanding of different software tools. To search and download images from the internet safely.	To understand that technology can be used to represent data in different ways, such as pictograms, tables, pie charts, bar charts and block graphs. To use data representations to answer questions about data. To use software to explore and create pictograms and branching databases.	I can assemble instructions into a simple algorithm. To understand that technology can be used to represent data in different ways, such as pictograms, tables, pie charts, bar charts, and block graphs. To develop an understanding of different software tools.
Vocabulary	Computer Keyboard Log in Log out Mouse Clicking Dragging Paint tool	algorithm artificial intelligence bug debug decompose directions input instructions order output problem virtual assistant	Instructions Right Left Arrow Circle Direction Turn Straight on Directions Program Algorithms Sequence Debug	background blurred crop device download edit filter import online resize search engine sequence software storage space visual effects	bar chart block graph branching database categorise chart compare data collection data record data representation line graph pictogram pie chart table tally	algorithm cells components data debug distance evaluate input instructions program save sequence spreadsheet
Online Safety	<u>Self-Image and Identity</u>	<u>Online Relationships</u> I can give examples of when I should ask	<u>Online Reputation</u> I can describe what information I should	<u>Managing Online Information</u>	<u>Privacy and Security</u> I can recognise more detailed examples of	<u>Copyright and Ownership</u>

	I can recognise that there may be people online who could make someone feel sad, embarrassed or upset. (Yr1)	permission to do something online and explain why this is important. (Yr1)	not put online without asking a trusted adult first. (Yr1)	I know / understand that we can encounter a range of things online including things we like and don't like as well as things which are real or make believe / a joke. (Yr1)	information that is personal to someone (e.g where someone lives and goes to school, family names). (Yr1)	I can save my work under a suitable title or name so that others know it belongs to me (e.g. filename, name on content). (Yr1)
Cross-Curricular links	RSE: Online Safety Art: Painting English: Reading and identifying letters.	English: Writing – composition, Spoken language Maths: properties of shapes, position and direction Geography: Geographical skills and fieldwork	Maths: counting and matching number symbols to its cardinal value.	English: Reading – comprehension RSE: Online safety Art and design	Maths: Number – number and place value, Statistics	DT: Design, Make, Evaluate, Technical knowledge Maths: Measurement, Statistics English: Writing – composition, Reading – comprehension History Science: Everyday materials

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Hawk Class	Computing systems and networks: Improving mouse skills (Yr1)	Programming 1: Algorithms (Yr1)	Skills showcase: Rocket to the moon (Yr1)	Computing systems and networks 1: What is a computer? (Yr2)	Programming 1: Algorithms and debugging (Yr2)	Computing systems and networks 2: Word processing (Yr2)
Prior knowledge	Computing systems and networks 1: Using a computer (EYFS)	Programming 1: All about instructions (EYFS)	Computing systems and networks 1: Using a computer (EYFS)	Computing systems and networks 1: Using a computer (EYFS)	Programming 1: Algorithms unplugged (Au2)	Skills showcase: Rocket to the moon (Sp1)
Future knowledge	Computing systems and networks 1: What is a computer? (Yr2)	Programming 2: Bee-Bot (Yr1)	Programming 2: MakeCode (Yr2)	Computing systems and networks 3: Journey inside a computer (Yr3)	Option 2: ScratchJr (Yr2)	Computing systems and networks 2: Emailing (Yr3)
Knowledge (new learning/key learning)	Log in and log out means to begin and	An algorithm is when instructions are put in an exact order.	When we create something on a computer it can be more easily saved	The difference between a desktop and a laptop computer.	To understand what machine learning is and how it enables	Touch typing is the fastest way to type.

	end a connection with a computer A computer and mouse can be used to click, drag, fill, select, add backgrounds, text, layers, shapes and clipart. Passwords are important for security and to keep us safe.	Decomposition means breaking a problem into manageable chunks, which is important in computing. Errors in an algorithm are called bugs and fixing these is called debugging.	and shared than a paper version. Some of the simple graphic design features of a piece of online software. A spreadsheet is an electronic table for sorting data.	People control technology. Some input devices that give a computer an instruction about what to do (output). Computers often work together.	computers to make predictions. Loops in programming are where you set a certain instruction (or instructions) to be repeated multiple times. Abstraction is the removing of unnecessary detail to help solve a problem.	I can make text a different style, size and colour. copy and paste is a quick way of duplicating text
Skills	To learn how to explore and tinker with hardware to find out how it works. To use a basic range of tools within graphic editing software. To develop control of the mouse through dragging, clicking and resizing images to create different effects. To develop an understanding of different software tools.	To recognise some devices are input devices and others are output devices. To learn that decomposition means breaking a problem down into smaller parts. To use decomposition to solve unplugged challenges. To assemble instructions into a simple algorithm. To debug instructions when things go wrong.	I can assemble instructions into a simple algorithm. To understand that technology can be used to represent data in different ways, such as pictograms, tables, pie charts, bar charts, and block graphs. To develop an understanding of different software tools.	To understand what a computer is and that it is made up of different components. To learn how we know that technology is doing what we want it to do via its output. To Use greater control when taking photos with cameras, tablets or computers. To develop word processing skills, including altering text, copying and pasting and using keyboard shortcuts. To use word processing software to type and reformat text.	To develop confidence with the keyboard and the basics of touch typing. To articulate what decomposition is. To Decompose a game to predict the algorithms used to create it. To learn that there are different levels of abstraction. To create a clear and precise algorithm.	To develop confidence with the keyboard and the basics of touch typing. To develop word processing skills, including altering text, copying and pasting and using keyboard shortcuts. To use word processing software to type and reformat text. To search for appropriate images to use in a document.
Vocabulary	Account Clipart	algorithm artificial intelligence	algorithm cells	battery buttons	abstraction algorithm	back button backspace

	drag drag and drop layers log off log on password resize screen (monitor) software tool username	bug debug decompose directions input instructions order output problem virtual assistant	components data debug distance evaluate input measure program save sequence share spreadsheet	desktop electricity input invention output robot screen (monitor) tablet technology	artificial intelligence bug clear correct data debug decompose error key features loop predict unnecessary	bold copyright cut highlight import italics keyboard shortcut navigate paste space bar text effects touch typing word-processing software
Online Safety	<u>Self-Image and Identity</u> I can explain how other people may look and act differently online and offline. (Yr2)	<u>Online Relationships</u> I can explain why it is important to be considerate and kind to people online and to respect their choices. (Yr1)	<u>Online Reputation</u> I can explain how information put online about someone can last for a long time. (Yr2)	<u>Managing Online Information</u> I know how to get help from a trusted adult if we see content that makes us feel sad, uncomfortable, worried or frightened. (Yr1)	<u>Privacy and Security</u> I can explain and give examples of what is meant by 'private' and 'keeping things private'. (Yr2)	<u>Copyright and Ownership</u> I understand that work created by others does not belong to me even if I save a copy. (Yr1)
Cross-Curricular links	RSE: Online safety Maths: Geometry – properties of shapes English: Reading – comprehension	English: Writing – composition, Spoken language Maths: properties of shapes, position and direction Geography: Geographical skills and fieldwork	DT: Design, Make, Evaluate, Technical knowledge Maths: Measurement, Statistics English: Writing – composition, Reading – comprehension Science: Everyday materials	English: Spoken Language Science: Working scientifically Design and technology: Design	English: Spoken language, Writing – composition Maths: Geometry – position and direction Geography: Geographical skills and fieldwork	English: Writing – transcription; Writing – vocabulary, grammar and punctuation; Reading – comprehension

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Red Kite Class	Computing systems and networks: Networks (Yr3)	Programming 1: Scratch (Yr3) New	Computing systems and networks 2: Emailing (Microsoft or Google) (Yr3)	Computing systems and networks 3: Journey inside a computer (Yr3)	Video trailers: iPad or other (Yr3)	Data handling: Comparison cards database (Yr3)
Prior knowledge	Computing systems and networks 1: What is a computer? (Yr2)	Option 1: *New* Programming 2: MakeCode (Yr2)	Computing systems and networks 2: Word processing (Yr2)	Computing systems and networks 1: What is a computer? (Yr2)	Stop motion – Option 1: Using tablets (Yr2)	Data handling: International Space Station (Yr2)
Future knowledge	Computing systems and networks 2: Emailing (Sp1)	Programming 1: Further coding with Scratch (Yr4)	Computing systems and networks: Collaborative learning (Yr4)	Computing systems and networks: Collaborative learning (Yr4)	Creating media: Website design (Yr4)	Data handling: Investigating weather (Yr4)
Knowledge (new learning/key learning)	To understand that a network is a group of interconnected devices. To know the components that make up a network (Wireless access point/WAP, Network switch, Router, Server and devices). To know that a server is central to a network and responds to requests made. To know that the internet connects all the networks around the world.	To understand that decomposition is the process of breaking down a task or problem into smaller parts. To break down a problem into smaller parts makes it easier to solve.	To understand that email stands for 'electronic mail.' To know that an attachment is an extra file added to an email. To understand that emails should contain appropriate and respectful content. To know that cyberbullying is bullying using electronics such as a computer or phone.	To know the roles that inputs and outputs play on computers. To know what some of the different components inside a computer are e.g. CPU, RAM, hard drive, and how they work together. To know what a tablet is and how it is different from a laptop/desktop computer.	To know that different types of camera shots can make my photos or videos look more effective. To know that I can edit photos and videos using film editing software. To understand that I can add transitions and text to my video.	To understand that a database is a collection of data stored in a logical, structured and orderly manner. To recognise a computer database can be useful for sorting and filtering data. To recognise different visual representations of data can be made on a computer.
Skills	Learning about the purpose of routers.	Tinkering with an existing text-based	Learning to log in and out of an email account.	Understanding what the different components of a	Using logical thinking to explore more complex software; predicting,	Using logical thinking to explore more complex software, predicting, testing

	Understanding the role of the key components of a network. Understanding that websites and videos are files that are shared from one computer to another. Learning about the role of packets. Identifying the key components within a network, including whether they are wired or wireless.	code to see how it affects a program. Remixing code to alter and add to an existing program. Recognising the relationship between what is happening in a program and the written (block) code. Working backwards, beginning to identify the code they think a program uses. Running small chunks of code at a time to find the error or bug.	Writing an email including a subject, 'to' and 'from'. Sending an email with an attachment. Replying to an email. Understanding the purpose of emails. Learning that not all emails are genuine, recognising when an email might be fake and what to do about it	computer do and how they work together. Drawing comparisons across different types of computers. Using decomposition to explain the parts of a laptop computer. Explaining the purpose of an algorithm.	testing and explaining what it does. Taking photographs and recording video to tell a story. Using software to edit and enhance their video adding music and text on screen with transitions.	and explaining what it does. Understanding the vocabulary associated with databases: field, record and data. Learning about the pros and cons of digital versus paper databases. Sorting and filtering databases to quickly retrieve information. Creating and interpreting charts and graphs to understand data.
Vocabulary	device file internet network network switch packet data router server the cloud user wi-fi wired wireless wireless access point	Loop Scratch Algorithm Debug Instruction Program	bcc (blind carbon copy) cc (carbon copy) domain email account email address inbox personal information positive language responsible digital citizen scammer spam email subject bar username virus	algorithm assemble CPU (central processing unit) desktop disassemble GPU (graphics processing unit) hard drive HDD (hard disk drive) infinite loop photocopier program QR Code RAM (random access memory) ROM (read only memory)	application camera angle clip cross dissolve edit film editing software graphics import key events recording slide sound effects storyboard time code trailer transition voiceover wipe	category chart data database field filter graph information interpret questionnaire record representation sort spreadsheet

Online Safety	<u>Self-Image and Identity</u> I can explain ways in which someone might change their identity depending on what they are doing online (e.g. gaming; using an avatar; social media) and why. (Yr3)	<u>Online Relationships</u> I can explain what is meant by 'trusting someone online', why this is different from 'liking someone online', and why it is important to be careful about who to trust online including what information and content they are trusted with. (Yr3)	<u>Online Reputation</u> I can explain who someone can ask if they are unsure about putting something online. (Yr3)	<u>Managing Online Information</u> I can explain that not all opinions shared may be accepted as true or fair by others (e.g. monsters under the bed). (Yr3)	<u>Privacy and Security</u> I can give reasons why someone should only share information with people they choose to and can trust. I can explain that if they are not sure or feel pressured then they should tell a trusted adult. (Yr3)	<u>Copyright and Ownership</u> I can explain why copying someone else's work from the internet without permission isn't fair and can explain what problems this might cause. (Yr3)
Cross-Curricular links	English: Spoken language	English: Spoken language; Writing – composition.	English: Writing – composition RSE: Online relationships	English: Spoken language Design and technology	English: Reading – comprehension Writing – composition	Maths: Number and place value, Statistics

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Buzzard Class	Computing systems and networks: Collaborative learning (Yr4)	Stop Motion: Animation (stop motion studio or cameras) (Yr5)	Programming 1: further Scratch coding (Yr4) New	Creating Media: Website design (Google or Microsoft) (Yr4)	Programming 1: Music (Yr5)	Data handling: investigating weather (Yr4)
Prior knowledge	Computing systems and networks 2: Emailing (Yr3)	Stop motion – Option 1: Using tablets (Yr2)	*New* Programming Scratch (Yr3)	Computing systems and networks: Collaborative learning (Au1)	Programming 1: Further coding with Scratch (Sp1)	Data handling: Comparison cards databases (Yr3)
Future knowledge	Computing systems and networks: Search engines (Yr5)	Skills showcase: Inventing a product (Yr6)	*New* Computational thinking (Yr4)	Skills showcase: Inventing a product (Yr6)	Programming 2: micro:bit (Yr5)	Data handling: Mars Rover 1 (Yr5)
Knowledge (new learning/key learning)	To know software can be used collaboratively online to work as a team.	To recognise decomposition of an idea is important when creating stop-motion animations.	To know that loops are used to save time when writing code by reducing repetition. To recognise a variable is a container	To know that a website is a collection of pages that are all connected. To know that websites usually have a homepage and	To know programmers often save time when creating code by taking code from one program and turning it into another.	To know that computers can use different forms of input to sense the world around them so that they can record and

	To recognise what type of comments and suggestions on a collaborative document can be helpful. To understand that you can use images, text, transitions and animation in presentation slides.	To understand that stop-motion animation is filmed one frame at a time using models and with tiny changes between each photograph. To recognise editing is an important feature of making and improving a stop-motion animation.	or holder for storing information that can change, e.g. numbers or text. To identify where the mistake is in the programming as part of the debugging process. To know that errors in a program could result from sequencing errors, coding errors or missing code.	subpages as well as clickable links to new pages, called hyperlinks. To know that websites should be informative and interactive.	To know that nested loops are loops within loops. To know that running a program to identify errors should be done before checking the code. To know that errors in a program could be a result of forgetting to end a loop.	respond to data ('sensor data'). To know that a weather machine is an automated machine that respond to sensor data. To understand that weather forecasters use specific language, expression and pre-prepared scripts to help create weather forecast films.
Skills	Understanding that computer networks provide multiple services, such as the world wide web, and opportunities for communication and collaboration. Use online software for documents, presentations, forms and spreadsheets. Understanding that software can be used collaboratively online to work as a team.	Decomposing animations into a series of images. Decomposing a story to be able to plan a program to tell a story. Using video editing software to animate	Tinkering with an existing text-based code to see how it affects a program. Remixing code to alter and add to an existing program. Creating loops to make code more efficient in block-based programs. Beginning to use variables in block-based programming languages to make programs more interactive. Including a conditional statement in block-based	Building a web page and creating content for it. Designing and creating a webpage for a given purpose. Using software to work collaboratively with others.	Looking at programming blocks and considering how they could be used in a program. Altering existing code with a new, specific outcome in mind. Independently using loops to make code more efficient in block-based programs. Using nested loops to make code more efficient. Systematically identify mistakes, problems or bugs in a program.	Understanding that weather stations use sensors to gather and record data that predicts the weather. Using keywords to effectively search for information on the internet. Designing a device that gathers and records sensor data. Recording data in a spreadsheet independently. Sorting data in a spreadsheet to compare using the 'sort by...' option.

			programming languages.			Understanding that data is used to forecast weather.
Vocabulary	average collaborate data representation e-document insert (file) multiple choice numerical data presentation rating reviewing comments share slide spreadsheet survey transition	animation animator decomposition digital device evaluate flipbook fluid movement frames moving images onion skinning still images stop motion storyboard thaumatrope zoetrope	condition if statement variable scratchJr coding algorithm debug evaluate programming	embed features Google Sites hobby homepage hyperlinks images insert online published record subpage tab theme web page website world wide web	Adapt code debug decompose loop music output pitch program repeat rhythm Scratch soundtrack tempo timbre tinker	Accurate climate zone condensation degree Celsius evaporation extreme weather forecast heat sensor pinwheel presenter satellite sensor data solar panel temperature thermometer tornado weather forecast
Online Safety	<u>Self-Image and Identity</u> I can explain how my online identity can be different to my offline identity. (Yr4)	<u>Online Relationships</u> I can demonstrate how to support others (including those who are having difficulties) online. (Yr5)	<u>Online Reputation</u> I can describe how to find out information about others by searching online. (Yr4)	<u>Managing Online Information</u> I can analyse information to make a judgement about probable accuracy and I understand why it is important to make my own decisions regarding content and that my decisions are respected by others (Yr4)	<u>Privacy and Security</u> I can explain how many free apps or services may read and share private information (e.g. friends, contacts, likes, images, videos, voice, messages, geolocation) with others. (Yr5)	<u>Copyright and Ownership</u> I can assess and justify when it is acceptable to use the work of others. (Yr5)
Cross Curricular Links	RSE: Respectful Relationships, courtesy and manners. English: Writing – composition and peer assessment.	Art and design: Develop techniques, including their control and their use of materials, with creativity and experimentation.	Mathematics: Number – multiplication and division.	RSE: Online Relationships – keeping safe, recognise risks and how to report. How information and data is shared and used online. English: Reading – comprehension.	Music. English: Reading – Comprehension.	Science – temperature, evaporation and condensation and water cycle. Geography – physical geography. Counties and cities of the United Kingdom.

	Maths: Interpreting data, bar charts and time graphs.			Discussions about books, English: Writing – composition.		Maths –data English: discussions, presentations, performances, role play, improvisations and debates.
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	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Eagle Class	Data handling: Big Data 2 (Yr6)	Computing systems and networks: Exploring AI (Yr6)	Computing systems and networks: Bletchy park and history of computing (Yr6)	Programming 2: Micro:bit (Yr6)	Skills showcase inventing a product (Yr6)	Creating Media: webpage (TeachComp) (Yr6)
Prior knowledge	Data handling 1: Big Data 1 Cycle B (Yr6)	Data handling: Big Data 2 (Au1)	Computing systems and networks: Search engines (Yr5)	Programming 1: Music (Yr5)	Stop motion – Option 1: Using tablets (Yr2)	Stop Motion: Animation (stop motion studio or cameras) (Yr5)
Future knowledge	Skills showcase: Inventing a product (Su1)	*NEW* Computing systems and networks: Bletchley Park and the history of computers (Sp1)	Data handling 1: Big Data 1 (Yr6)	Programming: Intro to Python (Yr6)	N/A as this is the last unit of work for this scheme.	Skills showcase: Mars Rover 2 Cycle B (Yr5)
Knowledge (new learning/key learning)	To know that data can become corrupted within a network but this is less likely to happen if it is sent in 'packets'. To know that devices or that are not updated are	To know AI is trained on data to recognise patterns and generate outputs. To know AI can be used to create visual content like pictures. To know AI can help generate basic HTML code to create the	To know the first computers were created at Bletchley Park to crack the Enigma code to help the war effort in World War 2. To know about some of the historical figures that contributed to technological	To know that a Micro:bit is a programmable device. To know that Micro:bit uses a block coding language similar to Scratch. To understand and recognise coding	To know what designing an electronic product involves. To know which programming software/language is best to achieve a purpose.	To understand the common features of webpages for different purposes To understand the need for copyright-free images on my website

	most vulnerable to hackers. To know the difference between mobile data and WiFi.	structure and layout of a website. To know there are ethical issues surrounding AI, including data privacy, bias and responsible use.	advances in computing. To know what techniques are required to create a presentation using appropriate software.	structures including variables. To know what techniques to use to create a program for a specific purpose (including decomposition).	To know the building blocks of computational thinking, for example, sequence, selection, repetition, variables and inputs and outputs.	To add content to a website, including text and images To understand navigation paths and have multiple web pages on my website, linked via hyperlinks
Skills	Understanding how corruption can happen within data during transfer. Understanding that computer networks provide multiple services. Creating formulas and sorting data within spreadsheets. Learning about the Internet of Things and how it has led to 'big data'. Learning how 'big data' can be used to solve a problem or improve efficiency.	Identify different types of AI and their applications in everyday life. Exploring text-based and image-based AI tools to understand how they generate content. Applying coding skills like decomposition and pattern recognition to interact with AI applications. Analysing the effectiveness of prompts and refining them for improved AI outputs. Exploring ethical considerations around AI use and its impact on society.	Learning about the history of computers and how they have evolved over time. Writing increasingly complex algorithms for a purpose. Debugging quickly and effectively to make a program more efficient. Remixing existing code to explore a problem. Predicting code and adapting it to a chosen purpose. Using search and word processing skills to create a presentation. Planning, recording and editing an audio recording.	Predicting how software will work based on previous experience. Writing more complex algorithms for a purpose. Iterating and developing their programming as they work. Confidently using loops in their programming. Using a more systematic approach to debugging code, justifying what is wrong and how it can be corrected. Using logical thinking to explore software more independently, making predictions based on their previous experience.	Debugging quickly and effectively to make a program more efficient. Remixing existing code to explore a problem. Predicting code and adapting it to a chosen purpose. Using logical thinking to explore software independently, iterating ideas and testing continuously. Creating and editing videos, adding multiple elements: music, voiceover, sound, text and transitions. Using design software Tinkercad to design a product.	Explore what makes a good website. Draw a webpage design that suits my purpose. Use technology respectfully and responsibly when online. Add content to my webpage. Make multiple webpages and link them using hyperlinks. Evaluate the user experience of the webpage.
Vocabulary	big data	AI	acrostic code	algorithm	abstraction	Website

	Bluetooth corrupted GPS infrared internet of things QR codes revolution RFID SIM simulation smart city smart school stop motion wi-fi wireless	AI-generated image AI-generated text algorithm applications authenticity code ethical generate HTML implications modify output prompt refine response trained	audio advert brute force hacking Caesar cipher chip and PIN system cipher combination date shift cipher discovery invention Nth letter cipher password pigpen cipher scrambled script secret secure technological advancement trial and error	animation Bluetooth code block debug decompose desktop input load loop Micro:bit outputs pairing pedometer polling repetition sabotage scoreboard systematic tinkering USB variables wi-fi	advert algorithm bug coding debug electronic image rights input loop program repetition selection sequence software structure variable	Hyperlinks Online Webpage HTML code Layout Fair use Copyright copyright-free images sources edit improve navigation paths content
Online Safety	<u>Self-Image and Identity</u> I can explain the importance of asking until I get the help needed. (Yr6)	<u>Online Relationships</u> I can explain that taking or sharing inappropriate images of someone (e.g. embarrassing images), even if they say it is okay, may have an impact for the sharer and others; and who can help if someone is worried about this. (Yr6)	<u>Online Reputation</u> I can describe ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect. (Yr5)	<u>Managing Online Information</u> I can identify, flag and report inappropriate content (Yr6)	<u>Privacy and Security</u> I can explain how many free apps or services may read and share private information (e.g. friends, contacts, likes, images, videos, voice, messages, geolocation) with others. (Yr5)	<u>Copyright and Ownership</u> I can assess and justify when it is acceptable to use the work of others. (Yr5)
Cross Curricular Links	PE –outdoor activity Maths – tables Geography – human geography DT– design of innovative, functional,	English: Writing – Composition.	History –chronological knowledge. Maths – solve number and practical problems. RSE – online safety. English: Writing – Composition.	English: Spoken Language – use spoken language to develop understanding through speculating, hypothesising, imagining and exploring ideas	DT– use research and develop design criteria to inform the design of innovative, functional, appealing products. English: Writing – Composition.	English: Writing – Composition. DT– use research and develop design criteria to inform the design of innovative, functional, appealing products.

	appealing products that are fit for purpose. English: Spoken Language.		DT– use research and develop design criteria.		Identifying audience and purpose and selecting appropriate grammar and vocabulary.	Maths: Data
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