

powerfulComputing

By the time they leave, pupils will:

- Be responsible, competent, confident and creative users of information and communication technology
- Appreciate how to be respectful and responsible online; recognise acceptable/unacceptable behaviour and know ways to report concerns about content and contact
- Appreciate how search engines work and evaluate digital content for suitability
- Understand that computer networks provide multiple services and opportunities for communication and collaboration
- Apply knowledge of information technology to new and unfamiliar technologies to solve problems
- Understand and apply the fundamental principles and concepts of computer science (abstraction, logic, algorithms, data representation, sequence, selection and repetition in programs) when designing and writing programs
- Use computational language when analysing a problem, breaking the problem down into smaller parts (decompose) to correct errors (debug)
- Know how to select, use and combine a variety of software on a range of digital devices to collect, analyse, evaluate and present data and information

EYFS links

EYFS: Computing is embedded throughout the whole of the curriculum.

Examples:

Use toy phones, cameras and computers within children's play.

Turn technological devices on and off; complete a simple programme on a device such as an iPad or a computer.

Draw information from computers to support children's learning.

Curriculum Intent – Computing at Mill View Primary School

At Mill View Primary School, we believe that learning is at its most powerful when it is challenged, tested, truly known, and when children can do something with it: change themselves, change their community, change the world. Computing sits at the heart of this vision through its insistence on logic: how does this system work, what happens if I change it, and how do I stay safe within it? Our Computing curriculum is designed not merely to inform, but to equip, building in pupils the computational thinking, digital literacy and online safety knowledge to create with technology and to use it critically and responsibly.

We are guided by the principle of Powerful Computational Knowledge: the understanding that emerges when disciplinary skill meets substantive knowledge. This knowledge is emancipatory: it demystifies the technology that shapes daily life, challenges passive consumption, and is fundamental in developing the resilience and logical thinking needed to debug a problem, online or off. It allows children to build the tools others only use. It progresses communities.

	Disciplinary Skills: the skills of a computer scientist How we apply computational thinking: abstraction, logic, algorithms, decomposition and debugging. At Mill View we use: Computer Science, Information Technology and Digital Literacy skills progression · Key Questions · An unplugged-to-plugged approach · Knowledge Organisers
	Substantive Knowledge: the knowledge of a computer scientist The factual content, technical vocabulary, and online safety knowledge that underpins safe and effective technology use. At Mill View we use: Key Questions · Curriculum Objectives · Progressive planning of units · Knowledge Organisers including key vocabulary and concepts for each unit

Powerful Computational Knowledge, combining these two areas **combine**, they produce something greater than the sum of their parts.

This knowledge is **emancipatory**. It demystifies the technology that shapes daily life and challenges passive consumption, and is fundamental in developing the resilience and logical thinking needed to debug a problem, online or off. Pupils begin to understand how digital systems work and are able to create with them, not just consume them. It is empowering. It progresses communities.

At Mill View we encourage logical thinking, resilience and creativity. We do this through careful, progressive planning of units and hands-on application, allowing children the chance to design, build, then debug and improve.

Our Five Curriculum Commitments

Oracy	Global Challenges	Career & Future Ready Learners	Inclusion	What Makes Our Curriculum Exceptional?
Computing gives pupils a precise, logical language for describing systems. At Mill View, oracy in Computing means: • Pupils use the precise vocabulary of computer science (algorithm, debug, sequence, variable, network) as naturally as they use everyday speech. • Pupils talk through their logic out loud before, during and after coding, explaining why a program works or fails. • Structured paired and group problem-solving is embedded in every unit. • Talk is used to explain reasoning, not just to describe what was clicked.	Our Computing curriculum connects pupils to a global digital world. • Units on online safety and networks place Mill View within a global conversation about how technology connects, and divides, communities. • We ask: who has access to technology, and who is excluded? How do digital systems shape opinion and behaviour worldwide? • Pupils consider the global reach and responsibility of the technology they use every day. • Our curriculum meets the 2025 Curriculum Review's call for global perspectives to be woven through, not added on.	Computing is one of the most directly future-facing subjects in the curriculum. • We develop transferable dispositions: logical thinking, resilience when a program fails, precision. • Career links are explicit: software engineers, cyber security analysts, data scientists, games designers, robotics engineers. • Pupils experience the full design cycle: planning, building, testing and debugging. • Digital literacy and online safety are explicitly linked to safe, confident participation in a digital world.	Inclusion at Mill View is a design principle, not a retrofit. • The "I can..." structure gives every pupil a clear entry point with scope for depth. • An unplugged-to-plugged approach means computational thinking is accessible before a keyboard is even needed. • Adaptive teaching means new concepts are pre-taught and rehearsed through hands-on, physical activities first. • Online safety teaching is explicit and revisited, so every pupil, regardless of access at home, is equally protected and informed.	What makes Computing at Mill View exceptional is the coherence of our vision from EYFS to Year 6. A clear conceptual spine: Computer Science, Information Technology and Digital Literacy skills build year on year alongside online safety knowledge. Practical by design: Every unit involves hands-on creation, not technology used passively. Emancipatory knowledge: We ask children to understand and build the systems that shape their world, not just consume them. The disciplinary habit: By Year 6, our pupils think like computer scientists. This is the entitlement of every child.

"Computing is learning at its most powerful: an algorithm tested until it works, a system understood from the inside, and a tool children can use to change themselves, their community, and their world."

Alignment with the Ofsted Inspection Framework, Computing Subject Report and 2025 Curriculum Review

Ofsted / Curriculum Review focus	How Computing at Mill View responds
Curriculum coherence: knowledge builds cumulatively	Computer Science, Information Technology and Digital Literacy skills are tracked and sequenced from EYFS to Year 6, so computational thinking is returned to, deepened, and tested across key stages.
Oracy as a curriculum entitlement	Pupils are taught to talk through their logic aloud, explaining why a program works or fails, addressing the Ofsted Computing subject report's call for pupils to articulate computational reasoning, not just produce a working product.
Global perspectives and contemporary relevance	Units on online safety and networks connect pupils to the global reach and responsibility of digital technology, meeting the 2025 Curriculum Review's call for global perspectives to be woven through, not added on.
Adaptive teaching: high expectations for all	Inclusion is a design principle. An unplugged-to-plugged approach and explicit, revisited online safety teaching ensure every pupil can engage with and stay safe in a digital world.
Assessment that proves knowledge has stuck	Key Assessment Questions, Knowledge Organisers and end-of-unit evaluation test whether computational concepts are secure and can be applied, not just encountered once.
Disciplinary knowledge and skills	Computer Science skills (computational thinking) are tracked separately from Information Technology and Digital Literacy knowledge, with explicit progression from EYFS to Year 6, in line with the National Curriculum for Computing.
Career and future readiness	Computational thinking, digital literacy and online safety are explicitly linked to careers across the digital economy, and to safe, confident participation in a digital world.

Curriculum End Points – Computing

Year 1

Online Safety 	Using SeeSaw 	Programming 1: Algorithms unplugged 	Programming 2: Bee-Bot 	Data Handling: Introduction to Data 	Skills Showcase: Rocket to the Moon 
Children can.... Search the internet safely and get help when needed Know top tips for staying safe online Understand the importance of a password	Children can.... share their learning on a safe social platform by recording their voice, writing text or taking pictures. Children know some benefits and dangers of sharing information online	Children can.... break down a problem in to smaller bits explain what an algorithm is follow a simple set of instructions	Children can.... programme a BeeBot to follow a route make corrections when things go wrong explain my thinking behind my program	Children can.... represent data in tables, charts and pictograms sort data explain why digital data might be more useful than paper data	Children can.... apply my skills with more independence adapt and change my thinking when I run in to problems

Year 2

Online Safety 	Computing Systems and Networks – What is a Computer? 	Computing Systems and Network: Word Processing 	Programming 1: Algorithms and debugging Programming 2: Scratch Jr 	Creating Media: Stop Motion 	Data Handling: International Space Station 
Children can.... Understand that personal information should not be shared on the internet. be respectful to others when sharing content online	Children can.... say what a computer is made up from say what personal information should and should not be shared on the internet say how computers are used in the wider world	Children can.... show the basic skills of touch typing copy and paste text, and using shortcuts	Children can.... explain that buttons cause effects explain what decomposition is explain what abstraction is create a clear algorithm use loops to make my code more efficient	Children can... take photos with good control use software to create animations create and label images	Children can... collect and input data interpret my data

Year 3						
Online Safety 	Computing Systems and Network: Networks and the Internet 	Programming 1: Scratch 	Computing Systems and Network: Emailing 	Computing Systems and Network: Journey inside a Computer 	Creating Media: Video Trailers 	Data Handling: Comparison Cards databases 
Children can.... recognise how social media platforms are used to interact explain cyberbullying Learning that not all information on the internet is factual explain who personal information should/ should not be shared with	Children can.... explain what a server does explain what a network is show how data is transferred	Children can.... explain the purpose of an algorithm use loops to make a code more efficient debug a code, justifying what was wrong	Children can.... log in and out of an email account write an email including a subject, to and from send an attachment	Children can.... explain the different components of a computer compare different types of computer	Children can.... explore the code behind an animation take photographs and record video to tell a story edit and enhance my video to add music, sounds and text	Children can.... use vocabulary relating to databases accurately sort and filter databases create and interpret charts and graphs
Year 4						
Online Safety 	Computing Systems and Network: Collaborative Learning 	Programming 1: Further Coding with Scratch 	Creating Media: Website Design 	Computing Systems and Network: HTML 	Programming 1: Computational Thinking 	Data Handling: Investigating Weather 
Children can.... Recognise what appropriate behaviour is when collaborating with others online Recognise that information on the Internet might not be true or correct and that	Children can.... work collaboratively with others understand that we can use software to collaborate	Children can.... code a simple game use past experiences to solve new problems	Children can.... design and create a webpage learn about adverts on the internet	Children can.... alter the code behind a website build a webpage and create content for it	Children can.... decompose a problem in to smaller parts use abstraction and pattern to edit and modify code remix an existing code	Children can.... use their skills to design a weather station which gathers and records data

some sources are more trustworthy than others Understanding why some results come before others when searching						
Year 5						
Online Safety 	Data Handling: Mars Rover 1 	Skills Showcase: Mars Rover 2 	Computing Systems and Network: Search Engines 	Programming 1: Music 	Programming 2: Micro:bit 	Creating Media: Stop Motion Animation 
Children can.... state about how permissions work and how to change them Considering the effects of screen-time on physical and mental wellbeing Know about online bullying and where to seek advice	Children can.... explain the difference between ROM and RAM explain what binary is and can understand simple binary explain who message can be sent using binary	Children can.... apply my skills to a project show how bit patterns represent images as pixels	Children can.... refine my search to find relevant information on the internet understand how my search results might be affected	Children can.... use a nested loop write code to achieve a desired affect use Scratch to create music	Children can.... understand the fetch, decode, execute cycle show how external devices can be programmed by a computer	Children can.... decompose animations in to a series of images decompose to plan a story programme an animation
Year 6						
Online Safety 	Computing Systems and Networks: Bletchley Park and the History of Computers 	Exploring AI 	Data Handling: Big Data 1 	Programming: Intro to Python 	Data Handling: Big Data 2 	Skills Showcase: Inventing a Product 
Children can.... Understand the importance of secure	Children can.... Explain that codes can be used for a number	Children Can... Explain what AI is and its basic functions.	Children can.... explain that infrared	Children can.... explain happens if I run specified code	Children can.... name some types of data that can be	Children can.... suggest how

passwords and how to create them, along with two-step authentication Use search engines safely and effectively Consider their digital footprint and online reputation Learn about how to collect evidence and report online bullying concerns	of different reasons and decode messages. Explain how to ensure a password is secure and how this works. Explain the importance of historical figures and their contribution towards computer science. Present information about their historical figures in an interesting and engaging manner. Develop an idea for a computer of the future and create a simple design. Produce a simple audio advert with simple edits, which demonstrate an understanding of how to use the software. Produce a simple audio advert with simple edits, which demonstrate an understanding of how to use the software.	Identify real-life applications of AI that are commonly used in everyday life. Identify how AI understands and processes text and image prompts. Generate and refine prompts to achieve the best possible response from AI. Identify how AI generates code and how it can be useful in web design. Identify how AI can be a useful starting point for a project. Explain the key ethical considerations of AI. Debate the potential of AI replacing human roles, presenting well-structured arguments	waves can transmit data identify a variety of ways to collect and send data explain why it is important to analyse data identify how you keep your data private and what is this right called	show common coding language break down your instructions in to smaller chunks create and correct loops	transferred wirelessly explain what Big Data is explain how smart devices work together decide and consider - should businesses collect data to improve their products?	programs can be improved explain how products can be designed and what features are needed explain how websites are created identify techniques used to advertise products
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Progression in Computing through the Year Groups

Code – Connect – Communicate – Collect



	Year 1 Inc Skills Showcase	Year 2	Year 3	Year 4 Inc Skills Showcase	Year 5 Inc Skills Showcase	Year 6 Inc Skills Showcase
Online Safety – Knowledge						
	Logging in and out and saving work on their own account Understand the importance of a password When using the internet to search for images, learning what to do if they come across something online that worries them or makes them feel uncomfortable Recognising when someone has been unkind online Learning some top tips for staying safe online Understanding how we 'share' information on the internet	Understanding that personal information should not be shared on the internet. Learning how to be respectful to others when sharing content online	Recognising how social media platforms are used to interact Learning to be a responsible digital citizen; understanding their responsibilities to treat others respectfully and recognising when digital behaviour is unkind Learning about cyberbullying Learning that not all emails are genuine, recognising when an email might be fake and what to do about it Learning that not all information on the internet is factual Understanding who personal information should/ should not be shared with	Recognising what appropriate behaviour is when collaborating with others online Recognising that information on the Internet might not be true or correct and that some sources are more trustworthy than others Understanding why some results come before others when searching Understanding that information on the internet is not all grounded in fact	Learning about how permissions work and how to change them Identifying possible issues with online communication Considering the effects of screen-time on physical and mental wellbeing Learning about online bullying and where to seek advice	Understanding the importance of secure passwords and how to create them, along with two-step authentication Using search engines safely and effectively Recognising that updated software can help to prevent data corruption and hacking Considering their digital footprint and online reputation and future implications they may have Learning about how to collect evidence and report online bullying concerns
Hardware - Knowledge						
	Learning how to explore and tinker with hardware to find out how it works Understanding that computers and devices around us use	Understanding what a computer is and that it's made up of different components Recognising that buttons cause effects	Understanding what the different components of a computer do and how they work together Drawing comparisons across different types of computers	• Learning about the purpose of routers	Learning that external devices can be programmed by a separate computer Learning the difference between ROM and RAM	Learning about the history of computers and how they have evolved over time Using the understanding of historic computers to

	inputs and outputs, identifying some of these Learning where keys are located on the keyboard Learning how to operate a camera	and that technology follows instructions Learning how we know that technology is doing what we want it to do via its output. Using greater control when taking photos with tablets or computers • Developing confidence with the keyboard and the basics of touch typing	Learning what a server does		Recognising how the size of RAM affects the processing of data Understanding the fetch, decode, execute cycle	design a computer of the future Understanding and identifying barcodes, QR codes and RFID Identifying devices and applications that can scan or read barcodes, QR codes and RFID Acknowledging that corruption can happen within data during transfer (for example when downloading, installing, copying and updating files)
	Networks and data representation - Knowledge					
	• Understanding what the internet is		• Learning what a network is and its purpose • Identifying the key components within a network, including whether they are wired or wireless • Recognising links between networks and the internet • Learning how data is transferred	• Consolidating understanding of the key components of a network • Understanding that websites & videos are files that are shared from one computer to another • Learning about the role of packets • Understanding that computer networks provide multiple	• Learning the vocabulary associated with data: data and transmit • Learning how the data for digital images can be compressed • Recognising that computers transfer data in binary and understanding simple binary addition • Relating binary signals (Boolean) to the simple	• Understanding that computer networks provide multiple services

				services, such as the World Wide Web, and opportunities for communication and collaboration	character-based language, ASCII • Learning that messages can be sent by binary code, reading binary up to 8 characters and carrying out binary calculations • Understanding how bit patterns represent images as pixels	
	Computational thinking - Skills					
	• Learning that decomposition means breaking a problem down into smaller parts • Using decomposition to solve unplugged challenges • Using logical reasoning to predict the behaviour of simple programs • Developing the skills associated with sequencing in unplugged activities • Learning that an algorithm is a set of	• Articulating what decomposition is • Decomposing a game to predict the algorithms used to create it • Using decomposition to decompose a story into smaller parts • Learning what abstraction is • Learning that there are different levels of abstraction • Explaining what an algorithm is • Following an algorithm	• Using decomposition to explain the parts of a laptop computer • Using decomposition to explore the code behind an animation • Using repetition in programs • Understanding that computers follow instructions • Using an algorithm to explain the roles of different parts of a computer • Using logical reasoning to explain how simple algorithms work	• Solving unplugged problems by decomposing them into smaller parts • Using decomposition to understand the purpose of a script of code • Using decomposition to help solve problems • Identifying patterns through unplugged activities • Using past experiences to help solve new problems • Using abstraction to identify the important parts when completing	• Decomposing animations into a series of images • Decomposing a program without support • Decomposing a story to be able to plan a program to tell a story • Predicting how software will work based on previous experience • Writing more complex algorithms for a purpose	• Decomposing a program into an algorithm • Using past experiences to help solve new problems • Writing increasingly complex algorithms for a purpose

	step by step instructions used to carry out a task, in a specific order • Follow a basic set of instructions • Assembling instructions into a simple algorithm	• Creating a clear and precise algorithm • Learning that computers use algorithms to make predictions • Learning that programs execute by following precise instructions • Incorporating loops within algorithms	• Explaining the purpose of an algorithm • Forming algorithms independently	both plugged and unplugged activities • Creating algorithms for a specific		
	Programming - Skills					
	• Programming a Bee-bot/Virtual Bee-bot to follow a planned route • Learning to debug instructions when things go wrong • Developing a how to video to explain how the Bee-bot works. • Learning to debug an algorithm in an unplugged scenario	• Using logical thinking to explore software, predicting, testing and explaining what it does • Using an algorithm to write a basic computer program • Learning what loops are • Incorporating loops to make code more efficient	• Using logical thinking to explore more complex software; predicting, testing and explaining what it does • Incorporating loops to make code more efficient • Remixing existing code • Using a more systematic approach to debugging code, justifying what is wrong and how it can be corrected	• Understanding that websites can be altered by exploring the code beneath the site • Coding a simple game • Using abstraction and pattern recognition to modify code • Incorporating variables to make code more efficient • Remixing existing code • Using a more systematic approach to debugging code, justifying what is wrong and how it can be corrected	• Programming an animation • Iterating and developing their programming as they work • Beginning to use nested loops (loops within loops) • Debugging their own code • Writing code to create a desired effect • Using a range of programming commands • Using repetition within a program • Amending code within a live scenario	• Debugging quickly and effectively to make a program more efficient • Remixing existing code to explore a problem • Using and adapting nested loops • Programming using the language Python • Changing a program to personalise it • Evaluating code to understand its purpose • Predicting code and adapting it to a chosen purpose

						• Altering a website's code to create changes
	Using Software - Skills					
	• Using a basic range of tools within graphic editing software • Taking and editing photographs • Understanding how to create digital art using an online paint tool • Developing control of the mouse through dragging, clicking and resizing of images to create different effects • Developing understanding of different software tools	• Developing word processing skills, including altering text, copying and pasting and using keyboard shortcuts • Using word processing software to type and reformat text • Using software to create story animations • Creating and labelling images	• Taking photographs and recording video to tell a story. • Using software to edit and enhance their video adding music, sounds and text on screen with transitions	• Building a web page and creating content for it • Designing and creating a webpage for a given purpose • Use Google online software for documents, presentations, forms and spreadsheets. • Work collaboratively with others	• Using logical thinking to explore software more independently, making predictions based on their previous experience • Using a software programme (Sonic Pi or Scratch) to create music • Using video editing software or animation software to animate • Identify ways to improve and edit programs, videos, images etc. • Independently learning how to use 3D design software package TinkerCAD	• Using logical thinking to explore software independently, iterating ideas and testing continuously • Using search and word processing skills to create a presentation • Planning, recording and editing a radio play • Creating and editing sound recordings for a specific purpose • Creating and editing videos, adding multiple elements: music, voiceover, sound, text and transitions to create a video advert • Using design software TinkerCAD to design a product • Creating a website with embedded links and multiple pages

	Using email and the internet - Knowledge					
	• Searching and downloading images from the internet safely • Understanding that we are connected to others when using the internet	• Understanding that personal information should not be shared on the internet. • Learning how to be respectful to others when sharing content online.	• Learning to log in and out of an email account • Writing an email including a subject, 'to' and 'from' • Sending an email with an attachment • Replying to an email • Identifying useful terms and phrases for search engines	• Understanding why some results come before others when searching • Understanding that information on the internet is not all grounded in fact	• Developing searching skills to help find relevant information on the internet • Understanding how apps can access our personal information and how to alter the permissions.	• Understanding how search engines work
	Using Data - Skills					
	• Introduction to spreadsheets • Representing data in tables, charts and pictograms • Sorting data and creating branching databases • Identifying where digital content can have advantages over paper when storing and manipulating data	• Collecting and inputting data into a spreadsheet • Interpreting data	• Understanding the vocabulary associated with databases: field, record, data • Learning about the pros and cons of digital versus paper databases • Sorting and filtering databases to easily retrieve information • Creating and interpreting charts and graphs to understand data	• Designing a weather station which gathers and records sensor data	• Understanding how data is collected	• Understanding how barcodes, QR codes and RFID work • Gathering and analysing data in real time • Creating formulas and sorting data within spreadsheets
	Wider use of technology - Knowledge					

	• Recognising common uses of information technology, including beyond school • Understanding some of the ways we can use the internet	• Learning how computers are used in the wider world	• Understanding the purpose of emails. • Learning what a search engine is • Recognising how social media platforms are used to interact	• Understanding that software can be used collaboratively online to work as a team	• Learn about different forms of communication that have developed with the use of technology.	• 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
	Digital literacy - Knowledge					
	• Logging in and out and saving work on their own account • Understand the importance of a password • When using the internet to search for images, learning what to do if they come across something online that worries them or makes them feel uncomfortable • Recognising when someone has been unkind online • Learning some top tips for staying safe online	Understanding that personal information should not be shared on the internet. • Learning how to be respectful to others when sharing content online.	• Learning to be a responsible digital citizen; understanding their responsibilities to treat others respectfully and recognising when digital behaviour is unkind • Learning about cyberbullying • Learning that not all emails are genuine, recognising when an email might be fake and what to do about it • Learning that not all information on the internet is factual • Understanding who personal information	• Recognising what appropriate behaviour is when collaborating with others online • Recognising that information on the Internet might not be true or correct and that some sources are more trustworthy than others • Learning about different forms of advertising on the internet.	• Learning about how permissions work and how to change them • Identifying possible issues with online communication • Considering the effects of screen-time on physical and mental wellbeing • Learning about online bullying and where to seek advice	• Understanding the importance of secure passwords and how to create them, along with two-step authentication • Using search engines safely and effectively • Recognising that updated software can help to prevent data corruption and hacking • Considering their digital footprint and online reputation and future implications they may have • Learning about how to collect evidence and report online bullying concerns

	Understanding how we 'share' information on the internet		should/ should not be shared with			
Big Ideas/Key Questions	Can I show good control of a mouse? Can I show how we can use the internet? Can I explain how we use information technology and give some examples? Can I break down a problem in to smaller bits? Can I explain what an algorithm is? Can I follow a simple set of instructions? Can I programme a BeeBot to follow a route? Can I make corrections when things go wrong? Can I explain my thinking behind my program? Can I take photos and edit them to change them? Can I download and search for images? Can I operate a camera? Can I represent data in tables, charts and pictograms?	Can I say what a computer is made up from? Can I say what personal information should and should not be shared on the internet? I can say how computers and used in the wider world? Can I show the basic skills of touch typing? Can I copy and paste text, and using shortcuts? Can I explain that buttons cause effects? Can I explain what decomposition is? Can I explain what abstraction is? Can I create a clear algorithm? Can I use loops to make my code more efficient? Can I take photos with good control? Can I use software to create animations?	Can I explain what a server does? Can I explain what a network is? Can I show how data is transferred? Can I explain the purpose of an algorithm? Can I use loops to make a code more efficient? Can I debug a code, justifying what was wrong? Can I log in and out of an email account? Can I write an email including a subject, to and from? Can I send an attachment? Can I explain the different components of a computer? Can I compare different types of computer? Can I explore the code behind an animation? Can I take photographs and record video to tell a story? Can I edit and enhance my video to add music, sounds and text?	Can I work collaboratively with others? Can I understand that we can use software to collaborate? Can I code a simple game? Can I use past experiences to solve new problems? Can I design and create a webpage? Can I learn about adverts on the internet? Can I alter the code behind a website? Can I build a webpage and create content for it? Can I decompose a problem in to smaller parts? Can I use abstraction and pattern to edit and modify code? Can I remix existing code? Can I use my skills to design a weather station which gathers and records data?	Can I explain the difference between ROM and RAM? Can I explain what binary is and can understand simple binary? Can I explain who message can be sent using binary? Can I apply my skills to a project? Can I show how bit patterns represent images as pixels? Can I refine my search to find relevant information on the internet? Can I understand how my search results might be affected? Can I use a nested loop? Can I write code to achieve a desired affect? Can I use Scratch to create music? Can I understand the fetch, decode, execute cycle? Can I show how external devices can be programmed by a computer? Can I decompose animations in to a series of images? Can I decompose to plan a story?	What code is and what is its purpose? Why are strong passwords important? What is the significance of Bletchley Park? Can you identify the contribution of historical figures to advances in computing? Can you explain what an operating system is? Can you add and edit sound effects to achieve an effect? Can you show how computers have changed over time? Can you explain your choices of your own computer design of the future? Can you explain that infrared waves can transmit data? Do you know a variety of ways to collect and send data? Why it is important to analyse data?

	Can I sort data? Can I explain why digital data might be more useful than paper data? Can I apply my skills with more independence? Can I adapt and change my thinking when I run in to problems?	Can I create and label images? Can I collect and input data? Can I interpret my data?	Can I use correct vocabulary? Can I sort and filter databases? Can I create and interpret charts and graphs?		Can I programme an animation?	How can you keep your data private and what is this right called? What happens if I run specified code? Can you show common coding language? Can you break down your instructions in to smaller chunks? Can you create and correct loops? Name some types of data that can be transferred wirelessly? What is Big Data? How do smart devices work together? Should businesses collect data to improve their products? How can programs be improved? How can products be designed and what features are needed? How are websites created? What techniques are used to advertise products?
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