Computing Medium Term Curriculum Map 2025-2026

		Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 1	Topic	**-Improving mouse skills -Online safety- Lesson 1**	**-Rocket to the moon (space) -Online safety Lesson 2**	**- Algorithms unplugged -Online safety Lesson 3**	**-Programming (Spring weather) -Online safety Lesson 4**	**-Introduction to data (minibeast hunt)**	**-Digital imagery (memories how photos have changed) Lesson 5**
	I can	1. pre-assessment in this lesson. I can log into a computer and access a website. Knowledge: understand why we need to log in to a computer Skills: log in and out of a computer account. Vocab: log in 2. I can develop my mouse skills. Knowledge: understand what we mean by click and drag. Skills: navigate a computer using a mouse. Vocab: navigate, click & drag 3. I can use mouse skills to	1. pre-assessment in this lesson. I can recognise that digital content can be represented in many forms. Knowledge: explain how a list made on a computer can be saved and shared more easily. Skills: use a computer to create a list. Vocab: digital content, represented, saved and shared 2. I can design a rocket. Knowledge: how to save my digital image to the correct folder.	1. pre-assessment in this lesson. I can understand what an algorithm is. Knowledge: understand that these instructions sometimes need to be carried out in order. Skills: explain that an algorithm is a set of instructions. Vocab: Algorithm, set of instructions. 2. I can follow instructions precisely to carry out an action. Knowledge: know why an algorithm must be clear and precise.	1. pre-assessment in this lesson I can explore a new device. Knowledge: know how to tinker with the buttons of a Bee-Bot to see what they do. Skills: complete a cycle of predict, test and review. Vocab: explore, device, Bee-Bot, predict, test, review. 2. I can create a demonstration video. Knowledge: explain what the buttons on a Bee-Bot do.	1. pre-assessment in this lesson. I can represent data in different ways. Knowledge: know that data can be shown in different ways. Skills: show data in different ways. Vocab: represent data, different ways. 2. I can use technology to represent data. Knowledge: use a mouse and keyboard. Skills: create a pictogram that shows animal data. Vocab: technology,	1. pre-assessment in this lesson. I can understand and create a sequence of pictures. Knowledge: recognise the importance of sequencing. Skills: sequence the different parts of my story. Vocab: sequence 2. I can take clear photos. Knowledge: know how to check the screen to see what is included in the photo. Skills: press the button gently to keep everything steady. Vocab: take photos, button. 3. I can edit photos Knowledge: identify ways to

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		draw and manipulate shapes. Knowledge: Know how to draw and edit shapes. Skills: click and drag objects to change their size or position. Vocab: Click & drag, size, position. 4. I can draw a scene from a story using digital tools. Knowledge: identify the key parts of a story. Skills: use drag and drop to move and resize images. Vocab: drag and drop, resize, effects. 5. I can create a self-portrait using digital techniques. Knowledge: identify different facial features. Skills: use click and drag to create and layer shapes. Vocab: digital techniques,	Skills: create a digital image using a graphics editor. Vocab: save, folder, digital image, graphics editor. 3. I can sequence a set of instructions. Knowledge: identify the importance of instructions being in the right order. Skills: put a set of instructions in the right order. Vocab: sequence, instructions, right order. 4. I can build a rocket. Knowledge: how to refer to my rocket design. Skills: build a rocket according to instructions.	Skills: explain the problems a robot can have following our instructions. Vocab: follow instructions, precisely, algorithm 3. I can understand that computers and devices around us use inputs and outputs. Knowledge: identify some input & output devices. Skills: identify some devices that are both input and output devices. Vocab: devices, input, output. 4. I can understand and be able to explain what decomposition is. Knowledge:	Skills: create a video to explain how to use a Bee-Bot. Vocab: Buttons, Bee-Bot, Create a video. 3. I can plan and follow a set of instructions precisely. Knowledge: know how to follow verbal instructions. Skills: give precise instructions. Vocab: plan, follow instruction, precise. 4. I can program a device. Knowledge: how to plan a Bee-Bot route. Skills: program a Bee-Bot to follow my planned route. Vocab: program,	represent data, mouse, keyboard. 3. I can collect and record data. Knowledge: identify different minibeasts. Skills: present this data digitally. Vocab: collect, record data, present data digitally. 4. I can sort data. Knowledge: identify and group different animals Skills: create questions to sort data and create a branching database. Vocab: sort data, branching database. 5. I can design an invention to gather data. Post assessment at	improve my photo. Skills: crop, resize and add a colour filter to my photo. Vocab: edit photos, crop, resize, colour filter. 4. I can search for and import images. Knowledge: know images can be found online. Skills: search and import an image. Vocab: search, import, images. 5. I can create a photo collage Knowledge: know how to organise photos on a page. Skills: resize and change the orientation of my images. Vocab: photo collage, organise photos, resize, orientation. 6. I can discuss ways to balance time spent

		layer, resize, move, change the order. 6. ***pre-assessment of online safety in this lesson.*** I can know what the internet is and how to use it safely. Knowledge: identify when something makes me feel uncomfortable online. Skills: offer advice on how to stay safe online. Vocab: internet safety, stay safe online.	Vocab: Design, Build, instructions 5. I can test a design and record data. Knowledge: how to evaluate the success of my design. Skills: measure distances accurately and record data. Vocab: test, record data. evaluate, measure accurately 6. I can understand different feelings when using the internet. Knowledge: identify a trusted adult and how they can help. Skills: suggest how a character might be feeling. Vocab: feelings, trusted adult.	understand how decomposition allows you to solve a problem more easily. Skills: explain what decomposition is. Vocab: decomposition. 5. I can understand how to debug an algorithm. Post assessment at the end of this lesson. Knowledge: spot bugs in algorithms. Skills: fix the error (debug it) and explain the problem it caused. Vocab: debug, algorithm. 6. **I can recognise how to treat others, both online and in person.** Knowledge: recognise how actions on the	device, Bee-bot. 5. I can create a program. Post assessment at the end of this lesson. Knowledge: know how to debug my instructions if they go wrong by identifying and correcting the mistake. Skills: use programming to give the Bee-Bot clear instructions. Vocab: program, debug, instructions. 6. I can recognise the importance of being careful when posting and sharing online. Knowledge: understand the meaning of 'sharing'	the end of this lesson. Knowledge: explain how computers understand different types of inputs. Skills: plan an invention that can gather data. Vocab: gather data, input.	online and offline. ***post-assessment of online safety in this lesson.*** Knowledge: name offline and online activities I enjoy. Skills: make a plan to balance my screen time with other offline activities. Vocab: balance time spent online and offline.

				internet can affect others. Skills: identify that feelings are the same whether online or in the real world. Vocab: treat others, actions on the internet.	and 'posting' information online. Skills: identify my own digital footprint. Vocab: Posting and sharing online, digital footprint.		
	Skills	• Learning how to login and navigate around a computer • Developing mouse skills • Learning how to drag, drop, click and control a cursor to create works of art.	• -Developing keyboard and mouse skills through designing, building and testing. • Creating a digital list of materials, using drawing software and recording data.	• Algorithms, decomposition and debugging are made relatable to familiar contexts, following directions, learning why instructions need to be specific.	• Introducing programming through the use of a Bee-Bot and exploring its functions.	• Learning what data is and the different ways it can be represented.	• Developing keyboard and mouse skills through designing, building and testing. • Creating a digital list of materials, using drawing software and recording data.
		Online safety- Learning how to stay safe online and how to manage feelings and emotions when someone or something has upset us.					
	Key Vocab	• Account • Clipart • Computer • Log on • Log off • Mouse • Password • Resize • Screen (monitor) • Software • Tool	• computer • program • create • data • digital content • e-document • folder • list • save • sequence • share	• algorithm • bug • computer • debug • decompose • device • input • instructions • output • solution	• algorithm • Bee-Bot • computing code • computer program • explain • explore • instructions • predict • tinker • video	• categorise • chart • computer • data • information • label • pictogram • record • sort • table • text	• crop • delete • download • drag and drop • editing software • image • import • resize • save as • search engine • sequence

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		• Username • spreadsheet • smart device • storage space • visual effects					
		Online safety • communicate • connect • devices • digital footprint • emotion • feelings • internet • internet safety • online • personal information • posting • respect • sharing • smart device • strangers • trust • wired • wireless					
	Sticky Knowledge	• Have the ability to explain how to log into computers and use the mouse and keyboard • Creating a piece of artwork that demonstrates clear control of the mouse, using dragging and clicking to create different effects. • using a variety of different tools to draw a scene from a story. • Creating a self-portrait that includes the key features of a face and using at least two different paint tools.	• -Use a computer to make a list. • Design a rocket using a basic range of tools on graphics editing software. • Put a set of instructions in the correct order and understand why this is important. • Build a model rocket according to instructions and their designs as well as discussing how they would make it better. • Input data into a table or spreadsheet and measure distances accurately.	• Writing clear algorithms, considering the different steps required. • Explain what an algorithm is. • Use clear instructions in their algorithm and follow an algorithm carefully. • Create a clear, achievable program for their virtual assistant and explain what inputs and outputs are. • Show clear decomposition of their designs, into the necessary steps to recreate it. • Identifying bugs and fixing algorithms.	• Explain what happened when they pressed the given buttons. Explaining why they think the buttons that they pressed were the right ones, recognising cause and effect. • Discussing what each button did and demonstrating how it worked. • Recognising which buttons are necessary in the sequence of instructions. • Predicting correct instructions to reach a pre-planned destination. • Identifying a destination and	• Representing data in different ways and using this to answer questions. • Logging in and using mouse and keyboard skills to navigate the computer; showing how the same data can be shown in a pictogram as well as tables and charts. • Accurately recording the number of different minibeasts they see and representing this data digitally. • Clicking and dragging objects to create a branching database; typing in questions to sort	• Explaining what is happening in a photo story. Planning three distinct parts of a photo story. • Identifying clear photos from less clear photos. Taking their own photos. • Acknowledging that images can be changed after being taken. Suggesting changes that can be made to photos. • Knowing that images can be found on the Internet. Explaining what to do if they see something they don't like. • Recognising that a collage means several photos on a page. Adding both images and text. Resizing and dragging images around the page.

					getting Bee-Bot there (in as many steps as necessary). • Programming the Bee-Bot to reach the goal as specified in the story. Identifying and correcting mistakes when they go wrong.	the data. • Designing a computerised invention to gather data; explaining how it works.	
	Online safety- • Children should know the meaning of 'sharing' and 'posting' in an online context • Children should know the 4 top tips for staying safe online 1) People you do not know are strangers 2) Be nice to people like you would be in the real world 3) Keep your personal information private 4) If you are unsure about anything, then tell an adult you trust.						
	Expert evidence	Children will show they can log in and save work on their own account. They will show they are learning to locate where keys are on the keyboard as well as developing basic mouse skills. They will know what to do and verbalise if they have concerns about content or contact online. They will create digital art using an online paint tool.	Children will be able to open saved documents. They will create lists and spreadsheets. They will show they can select software appropriately.	Children will be able to create algorithms. They should verbalise that computers need information to be presented in a simple and a clear way. They will be able to break a computational thinking problem into smaller parts in order to solve it.	Children will explore and tinker with hardware to find out how it works. They will construct a series of instructions into a simple algorithm. They should apply computing concepts to real world situations in an unplugged activity.	Children will be able to create, organise, store, manipulate and retrieve digital content. They will show they can select software appropriately. They will verbalise uses of technology beyond school.	Children will be able to create, organise, store, manipulate and retrieve digital content. They will verbalise what to do if they have concerns about content or contact online. They will use tablets to take photos. They will predict the behaviour of simple programs.

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		Online safety- They should understand that they need to be kind on the internet, as they would in real life. They should discover which devices connect to the internet and understand some tips for staying safe and why this is important.					
Year 2	Topic	**-What is a computer?** **- Online safety Lesson 1**	**-Algorithms and debugging** **-Online safety Lesson 2**	**-Programming: ScratchJr** **-Online safety Lesson 3**	**-Word processing** **-Online safety Lesson 4**	**-Stop motion**	**- International Space Station (link to the planet.)**
	I can	1. pre-assessment in this lesson. I can recognise the parts of a computer. Knowledge: name the key parts of a computer. Skills: explain the purpose of different computer parts. Vocab: key parts, computer, purpose. 2. I can recognise how technology is controlled. Knowledge: understand that people control technology. Skills: predict what technology will do. Vocab: technology, controlled, predict	1. pre-assessment in this lesson. I can decompose a game to predict the algorithms that are used. Knowledge: understand what the terms decomposition and algorithm mean. Skills: decompose a game to predict algorithms. Vocab: decompose, predict, algorithms. 2. I can understand that computers can use algorithms to make predictions. Knowledge: know what	1. pre-assessment in this lesson. I can explore a new application. Knowledge: explain what I found using ScratchJr. Skills: predict what something new will do. Vocab: application, predict, ScratchJr. 2. I can create an animation. Knowledge: recognise a loop in programming. Skills: use the programming blocks for a purpose.	1. pre-assessment in this lesson. I can begin to learn to touch type. Knowledge: know where each key is on a computer keyboard. Skills: type capital letters using 'shift'. Vocab: touch type, keyboard, shift 2. I can understand how to use a word processor. Knowledge: know how to type a sentence into a word processor. Skills: select text	1. pre-assessment in this lesson. I can understand what animation is. Knowledge: Recognise common uses of information technology beyond school Skills: Use technology purposefully to create, organise, store, manipulate and retrieve digital content Vocab: animation, stop-motion. 2. I can understand what stop motion	1. pre-assessment in this lesson. I can locate features on an interactive map. Knowledge: know how sensors keep astronauts safe. Skills: use an interactive map to locate features. Vocab: interactive map, locate, features. 2. I can create a digital drawing of essential items for life in space. Knowledge: recall how computers track the amount of items left. Skills: use mouse and keyboard skills to draw

		3. I can recognise technology. Knowledge: know examples of technology and non-technology Skills: suggest what might have a computer inside. Vocab: technology, computer 4. I can create a design for an invention. Knowledge: know what technological aspects need to be included in my design. Skills: include an input and output as part of my invention. Vocab: invention, input, output 5. I can understand the role of computers.Post assessment at the end of this lesson. Knowledge: understand that computers work together. Skills: explain where computers are used. Vocab: role, computers 6- ***pre-assessment of online safety in this lesson***.I can	an algorithm is. Skills: write a clear and precise algorithm. Vocab: computers, algorithms, prediction, clear and precise. 3. I can plan algorithms that will solve problems. Knowledge: know how to add loops in my algorithms Skills: devise and create algorithms to solve problems Vocab: algorithms, solve problems, loops 4. I can understand what abstraction is. Knowledge: know what abstraction is. Skills: give an example of when abstraction might be useful.	Vocab: animation, loop, programming 3. I can use characters as buttons. Knowledge: know which blocks to select for my purpose. Skills: program code to run 'on tap'. Vocab: characters, buttons, program code. 4. I can follow an algorithm. Knowledge: understand what each block in the program does. Skills: use an algorithm to help with my programming. Vocab: algorithm, block, programming. 5. I can plan and use a code to create an algorithm.Post	and make it bold or italic. Vocab: word processor, bold, italic. 3. I can understand how to add images to a text document. Knowledge: know how to search for and find an appropriate image. Skills: import and alter an image in a document. Vocab: images, text document, import, alter. 4. I can create a poetry book using sources from the internet. Knowledge: understand the importance of crediting source	is. Knowledge: Recognise common uses of information technology beyond school Skills: Use technology purposefully to create, organise, store, manipulate and retrieve digital content Vocab: stop-motion 3. I can add effects to my stop motion Knowledge: Recognise common uses of information technology beyond school Skills: Use technology purposefully to create, organise, store, manipulate and retrieve digital content	simple images. Vocab: digital drawing. 3. I can understand the role of sensors on the ISS. Knowledge: recall conditions that computers monitor with sensors. Skills: read temperatures using a thermometer. Vocab: sensors, temperature, thermometer 4. I can create an algorithm for growing a plant in space. Knowledge: recall how a sensor works. Skills: create algorithms to keep a plant healthy. Vocab: algorithm, sensor 5. I can interpret data. Post assessment at the end of this lesson Knowledge: retrieve data about planets.

		understand what happens to information posted online. Knowledge: recognise that information shared online stays there forever. Skills: explain what information is safe to share online. Vocab: information, posted online, safe to share, stays there forever.	Vocab: abstraction 5. I can understand what debugging is.Post assessment at the end of this lesson. Knowledge: understand the meaning of the word debugging. Skills: perform a task by following step-by-step instructions. Vocab: debugging, step-by-step instructions. 6. I can understand how to keep things safe and private online . Knowledge: identify why passwords are used. Skills: explain how to keep information private online. Vocab: keep things safe, private, passwords	assessment at the end of this lesson. Knowledge: know what an algorithm is. Skills: use an algorithm to write a computer program. Vocab: code, algorithm, computer program. **6- I can recognise when to deny permission online.** Knowledge: identify what denying permission means. Skills: explain why I should deny permission. Vocab: deny, permission	materials. Skills: copy and paste text into a document. Vocab: sources, internet, copy and paste. 5. I can create a digital piece of writing. Post assessment at the end of this lesson. Knowledge: know how to use different text styles. Skills: use keyboard shortcuts. Vocab: digital piece of writing, text styles, keyboard shortcuts. 6. I can recognise that not everything online is true. Knowledge: identify	Vocab: stop motion, effects 4. I can plan my stop motion animation. Knowledge: Understand how to use technology safely and respectfully, keeping personal information private Skills: Use technology purposefully to create, organise, store, manipulate and retrieve digital content Vocab: Plan, Stop Motion Animation 5. I can create my stop motion animation. Post assessment at the end of this lesson. Knowledge: Understand how to	Skills: locate column headers and identify rows containing different data. Vocab: interpret data, retrieve, column headers, rows

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					whether information is true or false. Skills: check the reliability of online information. Vocab: information, true or false, reliability.	use technology safely and respectfully, keeping personal information private Skills: Use technology purposefully to create, organise, store, manipulate and retrieve digital content Vocab: Plan, Stop Motion Animation	
	Skills	• Exploring what a computer is by identifying how inputs and outputs work and how computers are used in the wider world to design their own computerised invention.	• Developing an understanding of; what algorithms are, how to program them and how they can be developed to be more efficient, introduction of loops.	• Exploring what 'blocks' do' by carrying out an informative cycle of predict > test > review. • Programming a familiar story and making a musical instrument.	• Developing touch typing skills, learning keyboard shortcuts and simple editing tools.	• Learning how to create simple animations from storyboarding creative ideas.	• Learning how data is collected, used and displayed and the scientific learning of the conditions needed for plants and humans to survive.
		Online safety: Learning how to keep information safe and private online; who we should ask before sharing things online and how to give, or deny permission online.					
	Key Vocab	• battery • buttons • computer • desktop	• artificial intelligence (AI) • bug • correct	• animation • bug • code • debug	• backspace • copyright • image • import	• animator • storyboard • contraption • upload	• approximate • astronaut • data • digital content

		• device • electricity • invention • laptop • technology • wire	• data • debug • decompose • error • key features • loop • predict • unnecessary	• icon • imitate • instructions • sequence	• keyboard character • paste • undo/redo • touch typing	• decompose • design • download • film review • filming • import • image • plan • sketch • software • stop-motion	• experiment • interactive map • laboratory • monitor (verb) • satellite • sensor • space • survival • thermometer
		Online safety: • accept • consent • content • offline • online • password • permission • personal information • terms and conditions • trusted adult					
	Sticky Knowledge	• Confidently naming the peripherals: screen, keyboard and mouse and understanding the function of each of the parts. • They should also be able to spot peripherals on different types of computers. • Recognising that buttons cause effects and that technology follows instructions. • Recognising different forms of technology beyond laptops and tablets; suggesting what	• Writing a creative algorithm planned for the dinosaur game and explaining what decomposition means. • Writing clear and precise algorithms that can be understood by another person. • Creating algorithms to solve problems and beginning to use loops to make their code more efficient. • Clearly explaining	• Explain and recognise what the blocks are used. • Explaining what a loop is and why it's useful. • Being able to include 'button' characters • Recognising that the character is controlled by programming blocks. • Understanding the importance of sequencing.	• Understanding which are the home row keys and how to find them for typing as well as understanding and using spacebar and backspace correctly. • Typing and making simple alterations to text using buttons on a word processor. • Creating a	• Creating a flip book animation of a ball with small changes between images. • Creating a short stop motion with small changes between images. • Planning out an animation with one object.	• Navigating the digital map and describing and explaining at least one way in which astronauts' survival needs are met aboard the ISS. • Identifying and digitally drawing at least six items which fulfil basic human needs when aboard the ISS and explaining the importance of exercise, healthy eating and cleanliness. • -Reading the correct temperature on a

		the technology does (after observing it); explaining why they think something is technology. • Including inputs and/or outputs as part of their invention and suggesting how an invention works. • Recognising computers in the world around them and explaining the role of each computer.	what abstraction is and creating a plan which can be identified as a particular location through clear landmarks or a key. • Understanding what debugging is and identifying incorrect steps within an algorithm.	• Explaining the role of each of the blocks in their program. • Recognising which blocks matched the statements in the algorithm. • Using the 'cut and paste' paper algorithm when creating the program.	document which contains appropriate images and modification of text, using keyboard shortcuts. • Understanding how to use copy and paste to copy text from one document to another; using different text styles and editing tools and crediting source materials. • Children can explain what is meant by online information and what information is safe to be shared online.		thermometer and designing a display showing everything that needs to be monitored by sensors on the ISS. • Creating an algorithm that addresses all plants' needs and explaining how space exploration can benefit life on Earth. • Able to explain why water is essential to life and to identify which planets have a temperature range that might sustain life.
		Online safety: • Children can explain what is meant by online information and what information is safe to be shared online.					

		• Can explain why we need passwords and the need for a strong password. They know what information is private and how we can begin to make things private online. • Understanding that they need to ask permission before sharing content online. Explaining how it might make others feel if they have not asked permission or have shared information about someone else when asked not to. • Understanding that they have a right to say no/deny their permission and know who they can ask for help. • Understanding that not everything they see online is true and can explain some strategies to help them work out if information is reliable or not.					
	Expert evidence	Children should learn about inputs and outputs and how they are used in algorithms. They should understand what a computer is and the role of individual components.	Children should create and debug simple programs. They should use logical reasoning to predict the behaviour of simple programs. Children should understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.	Children should create and debug simple programs. They should use logical reasoning to predict the behaviour of simple programs. Children should understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. They should use technology purposefully to create, organise, store, manipulate and retrieve digital content.	Children should use word processing software to type and reformat text. They should understand the importance of staying safe online.	Children should use technology purposefully to create, organise, store, manipulate and retrieve digital content. They should understand how to use tablets or computers to take photos.	Children should use technology to create and label images and to put data into a spreadsheet. They should consider inputs and outputs to understand how sensors work

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		Online safety: Children should be able to identify how to keep personal information private. They should be using technology respectfully by asking for permission before sharing about others online.					
Year 3	Topic	**-Networks and the internet** **-Online safety Lesson 1**	**-Emailing** **-Online safety Lesson 2**	**-Data handling: Comparison cards databases** **- Safer Internet Day- 8/2/22**	**-Programming: Scratch** **-Online safety Lesson 3**	**-Journey inside a computer**	**-Creating media: Video trailers** **-Online safety Lesson 4**
	I can	1. pre-assessment in this lesson. I can recognise what a network is. Knowledge: understand the purpose of a network. Skills: name the key parts of a network. Vocab: network. 2. I can understand how information moves around a network and begin to recognise real world networks Knowledge: understand the journey of a file. Skills: explain parts of a network. Vocab: information, network,	1. pre-assessment in this lesson. I can understand what email is used for and to send an email. Knowledge: know what an email is. Skills: identify which method of communication suits each purpose. Vocab: email, communication 2. I can edit email content and add an attachment. Knowledge: know how to log in and log out of	1. pre-assessment in this lesson. I can understand the terminology around databases. Knowledge: recognise the meanings of the terms field, record and data. Skills: scan a record for relevant information. Vocab: databases, terminology, field, record, data. 2. I can compare paper and computerised databases. Knowledge: understand	1. pre-assessment in this lesson. I can explore a programming application. Knowledge: understand that Scratch is a coding application. Skills: predict what I think different code will do. Vocab: programming application, coding application, predict 2. I can use repetition (a loop) in a program. Knowledge: recognise	1. pre-assessment in this lesson. I can recognise basic inputs and outputs. Knowledge: recall that a computer follows instructions. Skills: identify some inputs and outputs. Vocab: inputs, outputs, follows instructions 2. I can identify the components inside a laptop. Knowledge: recall that a laptop is made up of many parts.	1. pre-assessment in this lesson. I can plan a book trailer. Knowledge: describe the purpose of a book trailer. Skills: identify the key events in a story. Vocab: plan, book trailer, key events. 2. I can take photos or videos to tell a story. Knowledge: know how to use digital devices to record video or take photos. Skills: frame shots differently to create the effect I want. Vocab: take photos, record

		file. 3. I can demonstrate how a website works. Knowledge: recognise that the internet is a network. Skills: list the parts of a network needed for a website to work. Vocab: internet, website's journey. network 4. I can explore the role of a router. Knowledge: recognise the role that a router plays in a network. Skills: give examples of how a router is used. Vocab: router, network 5. I can understand the role of packets. Post assessment at the end of this lesson. Knowledge: recognise that data is transferred across the internet. Skills: explain that routers	my email account. Skills: write an email to my teacher. Vocab: edit, email content, attachment, log in, log out 3. I can understand the importance of being kind online and what this looks like Knowledge: know how to send an email with an attachment. Skills: log into my email account. Vocab:being kind online, email, attachment. 4. I can understand that cyberbullying involves being unkind online. Knowledge: recognise when online behaviour is unkind.	what a paper database is and can name examples. Skills: compare the advantages and disadvantages of paper and computerised databases. Vocab: paper/computerised databases, advantages/disadvantages. 3. I can sort, filter and interpret data. Knowledge: know how to interpret information. Skills: input data into a database and filter data by a particular value. Vocab: sort, filter, interpret data. 4. I can represent data in different	when a loop is used. Skills: choose an appropriate loop. Vocab: repetition, loop, program. 3. I can program an animation. Knowledge: know how to decompose a project. Skills: select the correct blocks to achieve my goals. Vocab: program, animation, decompose. 4. I can program a story. Knowledge: know how to debug my own program. Skills: choose appropriate blocks. Vocab: program, debug.	Skills: recognise a laptop's inputs and outputs. Vocab: components, laptop, parts, inputs, outputs. 3. I can understand the purpose of computer parts Knowledge: know that a computer is made up of many parts. Skills: explain the purpose of each part. Vocab: purpose, computer parts. 4. I can understand the purpose of computer parts. Knowledge: know that a computer is made up of many parts. Skills: use a QR Code Vocab: purpose, computer parts, QR Code.	videos, frame shots. 3. I can edit a video. Knowledge: know how to tinker with film editing software on a tablet. Skills: import videos and photos into film editing software. Vocab: edit, video, film editin software, import videos/photos. 4. I can add text and transitions to a video. Knowledge: recognise the different transitions in film. Skills: add text to my video. Vocab: add text, transitions. 5. I can evaluate video editing.Post assessment at the end of this lesson. Knowledge: know how to share book recommendations. Skills: explain what makes a successful video. Vocab: evaluate, video editing.

		connect to send information. Vocab: packet data, internet, routers 6. ***pre-assessment of online safety in this lesson*** I can understand how the internet can be used to share beliefs, opinions and facts. Knowledge: understand that not all information on the internet is true. Skills: explain the terms belief, opinion and fact. Vocab: internet, beliefs, opinions, facts.	Skills: use positive language within an email. Vocab: cyberbullying, online behaviour, positive language 5. I can understand that not all emails are genuine. Post assessment at the end of this lesson. Knowledge: recall that I shouldn't click on links in an email unless I know what it is. Skills: identify when an email might be fake. Vocab: links, emails 6. I can understand the effects that some internet use can have on our feelings and emotional wellbeing. Knowledge: recognise why I need to ask for	ways. Knowledge: recognise the purpose of visual representations of data. Skills: create a graph and chart in Google Sheets. Vocab: represent data, visual representation, graphs, charts, Google Sheets. 5. I can sort data for a purpose.Post assessment at the end of this lesson. Knowledge: understand that databases are used for different purposes. Skills: identify how to sort and filter data. Vocab: sort data, filter data. 6. **I can identify the effects that the**	5. I can program a game. Post assessment at the end of this lesson. Knowledge: understand the purpose of an algorithm. Skills: decompose a problem. Vocab: program, algorithm, decompose.	5. I can decompose a tablet computer.Post assessment at the end of this lesson Knowledge: recall that a tablet is a computer. Skills: compare similarities and differences across different types of computer. Vocab: decompose, tablet, similarities/differences. 6. I can understand the ways personal information can be shared on the internet. Knowledge: understand what privacy settings are. Skills: devices can communicate with one	6. I can understand the rules for social media platforms. ***post-assessment of online safety in this lesson.*** Knowledge: understand what social media platforms are used for. Skills: list some top tips on using social media platforms for people to stay safe. Vocab: rules, social media platforms, stay safe

			permission. Skills: explain who I need to ask permission from before sharing content online. Vocab: permission, sharing content online.	**internet can have on people's feelings.** Knowledge: recognise how different online activities can affect my emotions. Skills: identify different ways that I use the internet. Vocab: effect, internet, people's feelings, emotions, online activities		another to share personal information. Vocab: personal information, privacy settings, devices, personal information.	
	Skills	• Learning what a network is and how devices communicate and share information. •	• Sending emails with attachments. • Understanding what cyberbullying is. •	• Learning about records, fields and data and sorting and filtering data. •	• Exploring the programme Scratch, following the predict > test > review cycle. • Learning about 'loops' and programming an animation, story and game.	• Assuming the role of computer parts and creating paper versions of computers to consolidate understanding of how a computer works. •	• Developing digital video skills to create trailers, with special effects and transitions.
		Online Safety : • Learning the difference between fact, opinion and belief; and how to deal with upsetting online content. • Knowing how to protect personal information online.					

Computing Medium Term Curriculum Map 2025-2026

	Key Vocab	• device • file • internet • network • network map • network switch • router • server • submarine cables • the cloud • wi-fi/wired/wireless • wireless access point	• account • attachment • BCC • CC • computer • cyberbullying • domain • email • email account • emoji • information • log off/ log on • username • spam • password	• categorise • data • database • fields • filter • graphs and charts • information • record • sort • spreadsheet	• animation • application • code • code block • debug • decompose • interface • loop • predict • program • remixing code • repetition code • review • tinker • sprite	• algorithm • computer • computer program • data • desktop • instructions • ROM • tablet device • trackpad	• application • voice • desktop • digital device • edit • film • film editing software • graphics • import • key events • laptop • plan • recording • sound effects • time code • voiceover
		Online safety; • accurate, • age restricted, • autocomplete, • beliefs, • block, • content, • digital devices, • fact, • fake news, • opinion, • privacy settings, • reliable, • report, • requests, • search engine, • security questions, • smart devices, • social media platforms, • social networking					
	Sticky Knowledge	• Recognising that a network is two or more devices connected and showing this information in a poster that combines text and images. • Recognising that files are saved on a server and that files travel through wireless and wire connections rather than travelling directly.	• Understanding how to log in and log out of email and sending a simple email which includes a subject plus 'To' and 'From' in the body text • Editing an email, typing the correct email address and adding at least one	• Explaining what is meant by field, record and data and playing the Comparison cards game by accurately comparing numbers and scanning for relevant information. • Identifying	• Being able to explain what happened when they added certain blocks. Suggesting how the colour differences could help them predict block actions. • Children can explain what a loop	• Suggesting what inputs and outputs are and recognising that the computer sends and receives instructions. • Should focus on the definitions of the CPU and hard drive as these are	• Creating a storyboard to plan their book trailer and describing the purpose of a trailer. • Using digital devices to record video or take photos, framing shots carefully to create the desired effects. • Importing videos and photos into film editing software.

		• Understanding that networks connect to the internet via a router and explaining parts of the journey a website goes through to reach your computer. • Explaining that routers connect us to the internet and suggesting what they have to do. • Explaining that websites are split into small pieces to be sent via the internet and that packets are encoded with information to get to the right place.	attachment before sending it. • Writing an email with instructions written using positive language. • Consider pairing pupils of mixed ability to support pupils of lower ability. • Sending an email which describes some of the best ways to avoid being tricked by fake emails.	examples of paper and computerised databases from a list of statements. • Putting values into a spreadsheet, sorting, filtering and interpreting that data and creating questions that can be answered by the data. • Creating a graph on Google Sheets, naming different types of chart and explaining the purpose of visual representations of data. • Explaining what databases are used for as well as sorting and filtering data for a specific purpose.	is and what its role in a program is. Children can include a loop in their program and explain what it's doing. • Suggesting which blocks are used and to create what effect. Suggesting possible additions to an existing program. Choosing blocks to create specific effects. • Suggesting what blocks/features have been used. Recognising where something on screen is controlled by code. Using a systematic approach to finding bugs. • Explaining what an algorithm is.	most straightforward. • Suggesting parts of a computer and explaining what an algorithm is. • Suggesting what memory is for inside a computer and using a QR code. • Recognising some computer parts relating to functions and making some laptop and tablet comparisons.	• Adding text to their trailer, as well as incorporating different transitions between shots or images. • Identifying and articulating what makes a successful book trailer and suggesting how to share book recommendations with others.

					Understanding the purpose of an algorithm. Using a class algorithm when creating a program.		
		Online safety • Confidence in understanding knowing examples of opinions, beliefs and facts. • The children's ability to recall some of the seven tips for dealing with upsetting online content. • The children understand that digital devices used can share personal information amongst each other. • Can draw the icons and/or interface of a popular social media platform discussed in their group's role play.					
	Expert Evidence	Children should identify network components and understand how they are used to connect to the internet and how data is transferred. They should show understanding 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.	Children should learn about cyberbullying and fake emails. They should understand the purpose of emails.	Children should use technology purposefully to create, organise, store, manipulate and retrieve data.	Children should use logical reasoning to explain how simple algorithms work. They should be designing, writing and debugging programs that accomplish specific goals, including controlling or simulating physical systems. They should be solving problems by decomposing them into smaller parts. They should use sequence, selection,	Children should understand what different components of a computer do. They should understanding that programs execute by following precise and unambiguous instructions.	Children should use technology purposefully to create, organise, store, manipulate and retrieve digital content, including searching for relevant information.

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					and repetition in programs. as well as working with variables and various forms of input and output		
		Online safety: Children should learn to distinguish between facts, opinions and beliefs on the internet. They should learn how to deal with upsetting online content as well as learn about how to protect our personal information using privacy settings and how to be discerning about what information we share and who with.					
Year 4	Topic	**- Website design - Online safety Lesson 1 and 2**	**- Further coding with Scratch -Online safety Lesson 3**	**- Investigating weather -**	**- HTML - Online safety Lesson 4**	**- Collaborative learning**	**- Computational thinking - Online safety Lesson 5 and 6**
	I can	1. pre-assessment in this lesson. I can understand that software can be used to work online collaboratively. Knowledge: understand I can work with a partner without being in the same room. Skills: contribute to teamwork sensibly and responsibly. Vocab: software, work online collaboratively, teamwork, sensibly and responsibly. 2. I can understand how to contribute to someone else's work effectively.	1. pre-assessment in this lesson. I can recall the key features of Scratch. Knowledge: name the main areas of Scratch. Skills: create a simple script for a new sprite to my stage. Vocab: Scratch, script 2. I can understand how a Scratch game works by using decomposition to identify key features.	1. pre-assessment in this lesson. I can log data taken from online sources within a spreadsheet. Knowledge: recognise what the weather is and what can affect it. Skills: record this data in a spreadsheet. Vocab: logo data, online sources 2. I can design a	1. I can understand that web pages are built using different programming languages, and one of them is HTML. Knowledge: recognise that some web pages are built using HTML. Skills: identify some HTML tags. Vocab: web pages, programming languages, HTML. 2. I can change the	1. pre-assessment in this lesson. I can understand that software can be used collaboratively online to work as a team. Knowledge: understand I can work with a partner without being in the same room. Skills: contribute to teamwork sensibly and responsibly. Vocab: software collaboratively. 2. I can understand how to contribute to	1. I can understand that computational thinking is made up of four key strands. Knowledge: recall that problems can be made easier if I use computational thinking. Skills: identify the four strands that make up computational thinking. Vocab: computational thinking. 2. I can understand what decomposition is and how to apply it to solve

		Knowledge: understand that it is important to be positive and supportive of my classmates. Skills: share my work with other people and access documents shared with me. Vocab: contribute, positive and supportive, share, access documents. 3. I can understand how to create effective presentations. Knowledge: understand how to use presentation software. Skills: include images and text in my slides. Vocab: presentations, images, texts, slides. 4. I can understand how to create and share Google Forms. Knowledge: understand how to create a Google Form. Skills: share a form with my	Knowledge: recognise that a sprite may contain more than one script. Skills: identify the parts of a Scratch game. Vocab: decomposition, script 3. I can understand what a variable is and how to make one. Knowledge: understand what variable means. Skills: use the 'ask' block in Scratch. Vocab: variable. 4. I can understand how to make a variable in Scratch. Knowledge: recognise that variables can be words or numbers. Skills: create a variable and use it to store information. Vocab: variable, store	weather station. Knowledge: understand what sensor data is. Skills: design a device to sense and record the weather. Vocab: weather station, sensor data 3. I can design an automated machine to respond to sensor data. Knowledge: know that sensor data can be used to help predict extreme weather. Skills: write an algorithm for an automated machine which uses selection. Vocab: automated machine, sensor data, predict, algorithm 4. I can understand	HTML. Knowledge: describe the purpose of some HTML tags. Skills: identify HTML tags. Vocab: HTML. 3. I can change the HTML and CSS to alter the appearance of an object on the web. Knowledge: recognise HTML tags. Skills: translate HTML into text and images. Vocab: HTML, CSS. 4. I can understand and explore more complex components of a web page. Knowledge: recognise	someone else's work effectively. Knowledge: understand that it is important to be positive and supportive of my classmates. Skills: share my work with other people and access documents shared with me. Vocab: contribute, share, access documents. 3. I can understand how to create effective presentations. Knowledge: understand how to use presentation software. Skills: include images and text in my slides. Vocab: effective presentations, images, text, 4. I can understand how to create and share	problems. Knowledge: know what decompose means. Skills: use decomposition to figure out what Scratch code does. Vocab: decomposition, solve problems, Scratch Code. 3. I can understand what pattern recognition and abstraction mean. Knowledge: understand how to abstract key information. Skills: use past experiences to understand how to solve new problems. Vocab: pattern recognition, abstraction, solve new problems. 4. I can understand how to create an algorithm and what it can be used for. Knowledge: know how to create an algorithm for drawing a square.

		class. Vocab: Google Forms, create, share. 5. I can understand how to use a shared spreadsheet to explore data. Post assessment at the end of this lesson. Knowledge: know how to use a spreadsheet to calculate averages and sums of numbers. Skills: export data to a spreadsheet. Vocab: shared spreadsheet, explore data, averages and sums of data. 6. ***Pre-assessment of online safety in this lesson*** I can describe how to search for information within a wide group of technologies and make a judgement about the probable accuracy. Knowledge: know how to	information. 5. I can use knowledge of how variables work to create a quiz.Post assessment at the end of this lesson. Knowledge: know how to create a range of questions. Skills: use the 'if/else' block to check whether an answer is correct. Vocab: variables 6. I can explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true. Knowledge: make my own judgments about what I read and see online. Skills: explain the difference between facts, opinions and	how weather forecasts are made. Knowledge: recognise how weather is predicted. Skills: use search engines to find information. Vocab: weather forecast, predicted, search engines 5. I can use green screen technology in a video to present a weather forecast. Post assessment at the end of this lesson. Knowledge: recognise what information is included in a weather forecast. Skills: create a short	that the changes I have made to a web page are not permanent. Skills: use the inspect tool to alter content on a web page. Vocab: web page, inspect tool, not permanent. 5. 5- I can alter key elements on a webpage including text and images .Post assessment at the end of this lesson. Knowledge: know how to use the inspect tool. Skills: alter the content in the <img> tag. Vocab: web pages,	Google Forms. Knowledge: understand how to create a Google Form. Skills: share a form with my class. Vocab: create, share, Google Forms. 5. I can understand how to use a shared spreadsheet to explore data. Knowledge: know how to export data to a spreadsheet. Skills: highlight data using conditional formatting. Vocab: shared spreadsheet, export date, conditional formatting. 6. I can explain that technology can be designed to act like or impersonate living	Skills: use my algorithm to write a script using Scratch. Vocab: algorithm, Scratch. 5. I can combine computational thinking skills to solve a problem. Post assessment at the end of this lesson. Knowledge: know different computational thinking skills to apply. Skills: select a skill to help me solve a problem. Vocab: computational thinking skills. 6. I can explain how technology can be a distraction and identify when I might need to limit the amount of time spent using technology. Knowledge: recognise the amount of time I spend on technology. Skills: explain how

		make judgments about the accuracy of the information I am presented with. Skills: describe how to search for information on search engines, social media and image and video sites. Vocab: judgement, probable accuracy.	beliefs. Vocab: facts, opinions, judgements	video. Vocab: weather forecast	inspect tool, alter.	things. Knowledge: know what a bot is. Skills: provide examples of bots. Vocab: bot, impersonate	technology can be both a positive and negative distraction. Vocab: technology, distaction
	Skills	• Learning how web pages and sites are created and how to embed media and links.	• Revisiting the key features and beginning to use 'variables' in code scripts.	• Researching and storing data on spreadsheets. • Designing a weather station.	• Learning about the markup language behind a webpage • Becoming familiar with HTML tags • Changing HTML and CSS code to alter images and 'remix' a live website.	• Learning how to work collaboratively and exploring a range of collaborative tools.	• Solving problems effectively using the four areas of abstraction, algorithm design, decomposition and pattern recognition.
		Online safety: • Searching for information and making a judgement about the probable accuracy. • Recognising adverts and pop-ups • Understanding that technology can be distracting.					
	Key Vocab	• collaboration • tab • content	• code • code block • conditional statement	• algorithm • temperature • automated machine	• code • content • copyright	• collaborate • spreadsheet • comment	abstraction algorithm design

		• website • create • WWW • design • edit • embed • feature • header • hyperlink • insert (file) • online • plan	• decompose • direction • feature • icon • orientation • position • program • project • stage • tinker • variable	• calculate • weather • climate • device • forecast • log data • predict • record • sensor • source • spreadsheet	• CSS • hacker • hex code • internet browser • permission • script • URL • web page	• transition • e-Document • edit • email • icon • insert (file) • link • presentation software • presentation • reply • reviewing comments • share	code code blocks computer decompose problem
		Online safety: • ad/ advertisement • accuracy • alter • belief • bot • chatbot • fact • fake • gaming • in-app purchases • influencer • implication • judgement • live streaming • opinion • pop ups • reliable • respectful • search engine • social media • snippet • sponsored					
	Sticky Knowledge	• Using most skills from the checklist on their website. • Creating a clear plan for their web page and beginning to create it. • Creating a professional looking web page with useful information and a clear style, which is easy for the user to read and find information from. • Creating a clear plan by referring back to their checklist to include a range of features.	• An understanding of how to create a simple script in Scratch as well as an ability to change sprite and prevent the sprite from rotating. • knowing some of the actions that make the quiz game work. • An understanding of what a variable is and how to use the 'say' and 'ask' blocks. • Use of a variable to	• Searching the web efficiently to find temperatures of different cities and recording this accurately. • Designing a weather station which gathers and records sensor data, explaining how it works and the units of measurement it	• Adding text between the heading and paragraph tags. Easily activating the goggles to investigate a web page. • Explaining how they altered the HTML to create their own posters. • Changing the colours of their object elements.	• Understanding the need to be thoughtful when working on a collaborative document. • Using comments to suggest changes to a document and understanding how to resolve comments on a document. • Using a variety of different slide styles to convey information including images and	• -An understanding that problems can be solved more easily using computational thinking. • -Understanding what the different code blocks do and creating a simple game using the code looked at in the start of the lesson plus a few further features. • Understanding the terms 'pattern recognition' and 'abstraction' and how they help to solve a

		• Creating four web pages with a range of features in their website	record a score. • An understanding of what a variable is and how it works within a program.	would use. • Designing an automated machine which uses selection to respond to sensor data. • Searching for and recording weather forecast information in a spreadsheet and explaining how this data is collected. • Creating a video which uses chroma keying and includes weather forecast information.	Changing the sizes of some of the elements. Explaining how they created their story. • Adapting the basic elements of a story within a web page using the 'Inspect Elements' tool. • Could use simpler website layouts such as 'Kiddle' and may need support before completing the activity independently.	transitions. • Creating a Google Form with a range of different questions types that will provide different types of answer, e.g. text, multiple choice or numerical values. • Exporting data to a spreadsheet, highlighting data, using conditional formatting and calculating averages and sums of numbers.	problem as well as making some changes to the existing code by recognising the patterns that cause the current actions to happen. • Creating a Scratch program which draws a square and at least one other shape. • Understanding how computational thinking can help to solve problems and applying computational thinking to problems they face.
		Online safety: • Being able to describe how to search over multiple platforms and are aware of the accuracy of the results presented. • Describing some of the methods used to persuade people to buy online . • Being able to explain the difference between fact, opinion and belief and recognise these online. • Can explain what a bot is and give examples of different bots. • Being able to explain some positive and negative distractions of using technology and small strategies on how to reduce the amount of time spent on technology. • Children can describe strategies for being safe online and give examples of how to be respectful. They know how to respect the thoughts and beliefs of						

		others.					
	Expert Evidence	Children should be selecting using and combining a variety of software to design and create a range of programs, systems and content that accomplish given goals. They should understand opportunities offered by the World Wide Web for communication and collaboration.	Children should use logical reasoning to explain how simple algorithms work. they should design, write and debugging programs that accomplish specific goals, including controlling or simulating physical systems. They should solve problems by decomposing them into smaller parts. Using sequence, selection and repetition in programs. They should also work with variables and various forms of input and output.	Children should understand why some sources are more trustworthy than others. Children should understanding the role of inputs and outputs in computerised devices.	Children should recognise that information on the internet might not be true or correct. They should use technology safely, by recognising acceptable/ unacceptable behaviour. They should know what to do when they have concerns about content or contact online. Children should understand that websites can be altered by exploring the code beneath the site. They should be able to design, write and debug programs that accomplish specific goals. Children should solve problems by decomposing them into	Children should select using and combining a variety of software to design and create a range of programs, systems and content that accomplish given goals. They should understand opportunities offered by the World Wide Web for communication and collaboration.	Children should understand what decomposition is and how it facilitates problem solving. They should design, write and debug programs that accomplish specific goals. They should understand abstraction and pattern recognition.

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					smaller parts.		
		Online safety:- Children should use technology safely and responsibly by considering the risks of screen-time and technology. They should use search technologies effectively, appreciating how results are selected and ranked.					
Year 5	Topic	**-Mars Rover 1 -Online safety Lesson 1**	**-Mars Rover 2 -Online safety Lesson 2**	**-Search engines Online Safety Day**	**-Micro:bit -Online safety Lesson 3**	**- Programming: music Lesson 4**	**-Stop motion animation -Online safety Lesson 5**
	I can	1. pre-assessment in this lesson. I can identify how and why data is collected from space. Knowledge: recall the meanings of the words data and transmit. Skills: identify a type of data that the Mars Rover may transmit back to Earth. Vocab: data, transmit. 2. I can identify how messages can be sent using binary code. Knowledge: identify binary as the most basic way that computers communicate. Skills: read binary numbers up to eight characters. Vocab: binary code. 3. I can identify the computer architecture of the Mars Rovers.	1. pre-assessment in this lesson. I can understand how bit patterns represent images as pixels. Knowledge: recall how computers transfer data in binary. Skills: identify that a pixel is the smallest possible element of a digital image. Vocab: bit patterns, images, pixels 2. I can explain how the data for digital images can be compressed. Knowledge: recall that images are made of	1. pre-assessment in this lesson. I can understand what a search engine is and how to use it. Knowledge: know what a search engine is. Skills: use a search engine to navigate the web. Vocab: search engine. 2. I can be aware that not everything online is true. Knowledge: recognise that not everything online is true. Skills: understand anyone can create a website.	1. I can tinker with a new piece of software. Knowledge: know how to explore something independently. Skills: predict what I think something new will do. Vocab: tinker, software, explore, predict. 2. I can program an animation. Knowledge: explain the difference between 'on start' and 'forever' blocks. Skills: decompose an animation into a series	1. I can tinker with Scratch music elements. Knowledge: understand that Scratch is a coding application with music elements. Skills: predict what I think different code blocks will do. Vocab: tinker, Scratch, music elements, coding application, predict, code blocks. 2. I can create a program that plays themed music. Knowledge: know how to use Scratch's basic	1. I can understand what animation is. Knowledge: understand and can explain what animation means. Skills: create my own 19th century animation toy. Vocab: animation, create, animation toy 2. I can understand what stop motion animation is. Knowledge: understand what animation means. Skills: create a short animation. Vocab: stop motion animation, short animation. 3. I can plan my stop motion video, thinking

		Knowledge: identify the difference between computer input and output. Skills: identify sensors. Vocab: computer architecture, input, output 4. I can use simple operations to calculate bit patterns. Knowledge: recall how binary is used to represent numbers up to 255. Skills: carry out binary addition. Vocab: simple operations, binary. 5. I can represent binary as text. Post assessment at the end of this lesson. Knowledge: recall that binary is the main means of all data transfer. Skills: use binary to create a written message. Vocab: binary, data transfer 6. ***pre-assessment of online safety in this lesson*** I can understand how apps can	pixels. Skills: explain one of the methods of JPEG compression. Vocab: data, digital images, compressed, pixels. 3. I can identify and explain the 'fetch, decode, execute' cycle. Knowledge: know what fetch, decode and execute looks like in different contexts and examples. Skills: explain the fetch, decode and execute cycle. Vocab: fetch, decode, execute cycle. 4. I can create a safe online profile and tinker with 3D design software. Knowledge: know how to navigate the	Vocab: aware, not true, website. 3. I can search effectively. Knowledge: understand the importance of keywords. Skills: use the acronym TASK. Vocab: search effectively, keywords. 4. I can create an informative poster. Knowledge: know that I need to include a title and at least five facts. Skills: choose appropriate pictures, colours and designs. Vocab: informative poster, title, facts, designs	of images. Vocab: program, animation, 'on start', 'forever blocks, decompose 3. I can recognise coding structures. Knowledge: identify some code blocks. Skills: predict what a block or program does. Vocab: coding structures, code blocks, predict, program. 4. I can create a program for a specific task. Knowledge: recognise code blocks. Skills: decompose a program. Vocab: program, specific task, code blocks, decompose. 5. I can create a	sound commands. Skills: include a loop in my program. Vocab: program, themed music, Scratch, basic sound commands, loop. 3. I can plan a soundtrack program. Knowledge: know how to plan my program by tinkering. Skills: decompose a story. Vocab: plan, soundtrack program, tinkering, decompose. 4. I can program a soundtrack. Knowledge: understand how to work from a plan. Skills: explain how my program enhances the scene.	about the characters I want to use. Knowledge: know how to keep my animation idea simple. Skills: design and create a character that can be used in my animation. Vocab: stop motion video, characters. 4. I can create a stop motion animation. Knowledge: understand how to change my plan to recognise when something is too difficult to animate. Skills: create a simple animation following my storyboard plan. Vocab: stop motion animation, storyboard plan. 5. I can edit and assess my stop motion animation. Knowledge: know how to assess my animation. Skills: make small changes

		access personal information and how to alter the permissions. Knowledge: recognise that passwords are needed for access to apps. Skills: explain the importance of keeping passwords safe. Vocab: apps, access, personal information, permissions, passwords.	Tinkercad interface. Skills: follow tutorials to create simple 3D objects. Vocab: safe online profile, Tinkercad interface 5. I can modify the design of a 3D object using CAD software.Post assessment at the end of this lesson. Knowledge: apply what I learned from Tinkercad tutorials to design a 3D object. Skills: create a tyre design that addresses the challenges of the Martian terrain. Vocab: modify, CAD software, Tinkercad tutorials. 6. I can understand the positive and negative aspects	5. I can understand how search engines work. Post assessment at the end of this lesson. Knowledge: understand the role of a web index. Skills: explain what web crawlers are. Vocab: search engines, web index, web crawlers	program. Knowledge: know how to debug a program. Skills: write an algorithm. Vocab: program, debug, algorithm. 6. I can understand how online information can be used to form judgements Knowledge: recognise why people search for personal information about others online. Skills: search for personal information about others online. Vocab: online information, form judgements, personal information.	Vocab: program, sound track, plan, enhances, scene. 5. I can program music. Knowledge: know how to combine known commands. Skills: code music with a purpose. Vocab: combine, known commands, code music, purpose. 6. I can discover ways to overcome bullying. Knowledge: recognise the differences between online and offline bullying. Skills: describe some of the differences between online and offline bullying. Vocab: overcome bullying, difference, online and offline	to my models to make my animation smoother. Vocab: edit 6. I can understand how technology can affect health and wellbeing. Knowledge: understand the advantages and disadvantages technology has to health (mental and physical). Skills: research advice and ways to support others with their online health and well-being. Vocab: Health & wellbeing

			of online communication. Knowledge: recognise the positive and negative forms of online communication. Skills: identify different types of online communication. Vocab: positive, negative, online communication			bullying	
	Skills	• Learning about the Mars Rover, exploring how and why it transfers data including instructions, and how messages can be sent using binary code.	• Exploring how the Mars rover: moves, follows instructions, collects and sends data • Understanding how computers work, what data is and how it is transferred.	• Learning about how page rank works and how to identify inaccurate information.	• Creating algorithms and programs that are used in the real world. • Using the 'predict, test and evaluate' cycle to create and debug programs with specific aims. •	• Building-on programming and music skills to create different sounds, beats and melodies which are put to the test with a Battle of the Bands performance!	• Creating animations, storyboard ideas and decomposing a story into small parts before putting it together to create the illusion of a moving image.
		Online safety • Learning about app permissions; the positive and negative aspects of online communication; that online information is not always factual; how to deal with online bullying and managing our health and wellbeing.					

Computing Medium Term Curriculum Map 2025-2026

	Key Vocab	• binary code • data • sequence • data transmission • discovery • signal • distance • simulation • input • space (astronomy) • moon • numerical data • output • planet • radio signal • scientist	• algorithm • binary image • bit • bit pattern • CAD • data • encode • image • JPEG • memory computer • operating system • pixels	• algorithm • company logo • data leak • data privacy • inaccurate information • index • keywords • network • online • page rank • TASK • web crawler • website • WWW	• .hex file • variable • .zip file • bluetooth • code blocks • decompose • emulator • feature • loop • pedometer • predict • systematic • tinker	• basic commands • tinker • bug/debug • code (computer and verb) • error • live loop • loop • pitch • program language • rhythm • soundtrack • tempo • timbre	• animation • animator • background • decompose • design • digital device • duplicate • editing • frame • illusion • onion skinning • stop-motion • storyboard • upload
		Online safety: • application 'app' • anonymity • bullying • emoji • gif • hacked • interpreted • judgement • meme • mental health • misinterpreted • permissions • reliable • reputation					
	Sticky Knowledge	• Identifying some of the types of data which the Mars Rover could collect (for example, photos). Explaining how the Mars Rover transmits the data back to Earth (radio waves) and the challenges involved in this (the great distance). Researching a comparative fact about the distance to Mars. • Reading any number in binary, up to eight bits.	• Creating a pixel picture, explaining that a pixel is the smallest element of a digital image and that binary is used to code and transfer this data. • Saving JPEG as a bitmap and recognising the difference in file size as well as	• Explaining what a search engine is, suggesting several search engines to use and explaining how to use them to find websites and information. • Suggesting that things online aren't always true and recognising what to check	• Confidence to clip blocks together and predict what will happen. Making connections with previous programming interfaces they've used, e.g. Scratch. • -Creating their own images to make the animation and recognising	• Generating ideas, testing and changing throughout the lesson. • Explaining what the basic commands do. • Explaining how their program linked to the theme. Including a loop in their	• Creating a toy with simple images with a single movement. • Creating a short stop motion with small changes between images. • Thinking of a simple story idea for their animation then decomposing it into smaller parts to create a storyboard with

		• Identifying input, processing and output on the Mars Rovers. • Reading binary numbers and grasping the concept of binary addition. • Relating binary signals (Boolean) to a simple character based language, ASCII.	explaining how pixels are used to transfer image data. • Explaining the 'fetch, decode, execute' cycle in relation to real-world situations. • Creating a profile with a safe and suitable username and password and beginning to use 3D design tools. • Independently taking tutorial lessons, applying what they have learnt to their design and understanding the importance of using an online community responsibly.	for. • Explaining why keywords are important and what TASK stands for, using these strategies to search effectively. • Recognising the terms 'copyright' and 'fair use' and combining text and images in a poster. • Making parallels between book searching and internet searching, explaining the role of web crawlers and recognising that results are rated to decide rank.	the difference between 'on start' and 'forever'. • Recognising blocks they've used previously, identifying inputs and outputs used and making predictions about how variables work. • Choosing appropriate blocks to complete the program and attempting the challenges independently. • Breaking a program down into smaller steps, suggesting appropriate blocks and matching the algorithm to the program.	work. Correcting their own simple mistakes. • Explaining their scene in the story. Being able to link the musical concepts to their scene. Recognising that they can program their music in that way. • Including a repeat and explaining its function to enhance music. • The ability to code a piece of music that combined a variety of structures. Using loops in their programming. Recognising that programming music is a way to	simple characters. • Making small changes to the models to ensure a smooth animation and deleting unnecessary frames. • Have a clear animation with added effects such as extending parts and the use of a title. They will also be able to provide helpful feedback to other groups about their animations.

						apply their skills.	
		Online safety: • Understanding that passwords need to be strong and that apps do require some form of passwords. • Recognising a couple of the different types of online communication and know who to go to if they need help with any communication matters online. • Searching for simple information about a person, such as their birthday or key life moments. • Knowing what bullying is and that it can occur both online and in the real world. • Recognising when health and wellbeing are being affected in either a positive or negative way through online use. Offering a couple of advice tips to combat the negative effects of online use.					
	Expert Evidence	Children should 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. They should use search technologies effectively, appreciating how results are selected and ranked, and be discerning in evaluating digital content. They should recognise that computers transfer data in binary and understand simple binary addition.	Children should develop their CAD skills. They should understand how image data is transferred.	Children should recognise that information on the internet might not be true or correct. They should know how to use keywords to quickly find accurate information.	Children should use block coding to program a device. They should explore variables and different forms of input. Children should understand how external devices can be programmed by a separate computer.	Children should select using and combining a variety of software to design and create a range of programs, systems and content that accomplish given goals. They should use programming language to create music, including use of loops.	Children should use technology purposefully to create, organise, store, manipulate and retrieve digital content. They should understand how to use tablets or computers to take photos. Children should consider sequence and selection of frames when editing work.
		Online safety: Children should understand permissions required by apps to access personal information. They should consider online judgements that people make and how they treat others online.					

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Year 6	Topic	**- Big Data 1 -Online safety Lesson 1 and 2**	**- Big Data 2 -Online safety Lesson 3 and 4**	**- Computing systems and networks: Bletchley Park - Safer internet day**	**-Computing Systems and networks: Exploring AI**	**-Intro to Python -Online safety Lesson 5**	**-Skills showcase -Online safety Lesson 6**
	I can	1. pre-assessment in this lesson. I can identify how barcodes and QR codes work. Knowledge: recall how the data contained within barcodes and QR codes can be used by computers. Skills: identify and collect data from QR codes. Vocab: barcodes, QR codes, data. 2. I can know how infrared waves transmit data. Knowledge: recall that infrared light can be used for a variety of purposes. Skills: explain how infrared light can be used to transmit data. Vocab: infrared, transmit, data. 3. I can recognise the uses of	1. I can explain how data can be safely transferred. Knowledge: recognise the need to update devices and software. Skills: identify that data can become corrupted within a network. Vocab: data, safely transferred, update devices and software, corrupted, network 2. I can investigate the data usage of online activities. Knowledge: recognise the differences between WiFi and mobile data.	1. I can understand that there are lots of different types of secret codes. Knowledge: recognise some common secret codes. Skills: explain why codes might be valuable. Vocab: secret codes, valuable. 2. I can understand the importance of having a secure password. Knowledge: understand why it is important to have a secure	1. I can explore the basics of AI. Knowledge: know what AI is. Skills: identify real-life applications of AI that we use daily. Vocab: AI 2. I can recognise how AI processes and responds to text prompts. Knowledge: recognise how some prompts and responses go together. Skills: create an AI-type response with a given prompt. Vocab: Text Prompts.	1. I can tinker. Knowledge: know how to explore something independently. Skills: predict what I think something new will do. Vocab: tinker 2. I can understand nested loops. Knowledge: understand why we use loops. Skills: explain what a loop is. Vocab: nested loops 3. I can understand basic Python commands. Knowledge: know how to carry out	1. I can design an electronic product. Knowledge: know that programs are designed for a specific purpose. Skills: evaluate code and understand what it does. Vocab: electronic product. 2. I can code and debug a program. Knowledge: know how to use sequence, selection, repetition, variables, inputs and outputs within my program. Skills: debug programs and make them more efficient. Vocab: code/debug a program. 3. I can use CAD to design a product.

		RFID. Knowledge: recall that encoding keeps data safe. Skills: identify how RFID can be used to transmit data. Vocab: RFID, encoding, keeping data safe, transmit data. 4. I can input and analyse real-world data. Knowledge: recognise further uses of RFID. Skills: input and present data in a spreadsheet. Vocab: input, analyse, real-world data, RFID, present data, spreadsheet. 5. I can analyse and evaluate data. Post assessment at the end of this lesson. Knowledge: recall how RFID is used in data transfer. Skills: identify how RFID helps to solve real-world data challenges. Vocab: analyse, evaluate, data, RFID, challenges. 6. ***pre-assessment of online safety in this lesson*** I can	Skills: compare methods of wireless data transfer. Vocab: data usage, investigate, online activities, WiFi, mobile data, wireless data transfer 3. I can identify how data analysis can improve city life. Knowledge: recognise how the IoT has led to Big Data. Skills: identify the meaning of the term 'Internet of Things'. Vocab: data analysis, IoT, Big Data 4. I can design a system for turning a school into a smart school. Knowledge: evaluate the methods of data transfer. Skills: apply Big Data/IoT principles to solve a problem.	password. Skills: describe what is meant by brute force hacking Vocab: secure password, brute force hacking. 3. I can understand the importance of Bletchley Park to the World War II war effort. Knowledge: recognise the role of Bletchley Park during World War Skills: identify and describe the achievements of key figures in computing history. Vocab: Bletchley Park, Key figures, Computing History. 4. I can understand	3. I can recognise how AI can be used to explore and generate images. Knowledge: recognise how AI uses patterns and what it knows to combine words in prompts. Skills: create a clear and detailed prompt for an AI to generate an image Vocab: Explore/generate images. 4. I can apply AI-generated HTML code to the website Trinket Knowledge: recognise how AI can be used in web design. Skills: identify how AI can be used to	commands for a purpose. Skills: decompose a picture. Vocab: basic Python commands. 4. I can use loops when programming. Knowledge: understand what a loop is. Skills: use the syntax for a loop. Vocab: loops. 5. I can understand the use of random numbers. Knowledge: identify the need for random numbers. Skills: decompose a program. Vocab: random numbers.	Knowledge: understand the inputs and outputs needed for my product. Skills: design appropriate housing for my product. Vocab: CAD 4. I can create a website. Knowledge: create an appealing website for my product. Skills: describe clearly what my product is and what it does. Vocab: create a website. 5. I can create and edit a video Knowledge: understand and articulate the key benefits of my product. Skills: record a video or take photos of my product. Vocab: create/edit a video. 6. I can be aware of strategies to help

		describe issues online that give us negative feelings and know ways to get help. Knowledge: recognise scenarios that could make someone feel sad, worried, uncomfortable or frightened. Skills: give examples of how to get help online and offline. Vocab: issues, get help, online, offline.	Vocab: system, smart school, data transfer, Big Data, IoT principles 5. I can present ideas for turning a school into a smart school. Knowledge: listen to the ideas of my peers and provide effective feedback on their presentations. Skills: present my ideas for improving a school through the application of Big Data. Vocab: smart school, present, Big Data. 6. I can explore the impact and consequences of sharing online. Knowledge: know how to be kind and show respect for others online. Skills: identify the risks of sharing things online,	about some of the historical figures that contributed to technological advances in computing. Knowledge: recognise the components of a computer and why they are important. Skills: identify how computers have evolved over time. Vocab: historical figures, technological advances, components, evolved. 5. I can create an audio advert for a future computer. Knowledge: know what to include in a script for an audio advert. Skills: use audio recording software to	generate code. Vocab: AI-generated HTML code. 5. I can debate the ethical implications of AI. Knowledge: understand the key ethical considerations of AI. Skills: identify situations where AI could be beneficial and where it could be harmful. Vocab: ethical implications of AI. 6. I can describe how to capture bullying content as evidence. Knowledge: know a range of strategies to collect evidence. Skills: describe who	6. I can manage personal passwords effectively. Knowledge: know how to create a strong password. Skills: explain what to do if my password is shared, lost or stolen. Vocab: personal passwords.	be protected online. Knowledge: know some simple ways to increase my privacy settings. Skills: explain why I should keep my software updated. Vocab: protected online.

			even if they are sent privately. Vocab: impact, consequences, sharing online, respect, risks, sharing things online, privately.	create a recording. Vocab: audio advert, future computer, script, audio recording software. **6. I can understand how to create a positive online reputation.** Knowledge: understand what a positive online reputation is. Skills: explain strategies to create a positive online reputation. Vocab: positive online reputation, strategies.	to share evidence with to help me. Vocab: capture bullying content.		
	Skills	• Identifying how barcodes and QR codes work. • Learning how infrared waves are used for the transmission of data while recognising the uses of RFID.	• Further developing understanding of how networks and the Internet are able to • share information. • Learning how big data can be used to design smart	• Discovering the history of Bletchley and learning about code breaking and password hacking. • Demonstrating digital literacy	• Writing, recording and editing radio plays set during WWII • Learning about how computers have evolved.	• Using the programming language 'Python' to create designs and art. • Learning how to • create loops and nested loops to make their code	• Designing a product, pupils: evaluate, adapt and debug code to make it suitable for their needs and designing products in CAD and creating a website and video.

			buildings.	skills by creating presentations.		more efficient.	
		Online safety: • Learning to deal with issues online; about the impact and consequences of sharing information online; how to develop a positive online reputation; combating and dealing with online bullying and protective passwords.					
	Key Vocab	• barcode • signal • boolean • systems or data • brand • analyst • commuter • transmission • contactless • data • data privacy • encrypt • infrared waves • NFC • QR code • radio waves • RFID	• big data • bluetooth • corrupt data • digital revolution • GPS • infrared waves • IoT • QR code • SIM • computer simulation • smart school/city	acrostic code • brute force hacking • Caesar cipher • cipher • encrypt • invention • Nth letter cipher • password • pigpen cipher • technological advancement • trial and error	• background noise • byte • computer • CPU • memory storage • mouse • OS • radio play • RAM • ROM • sound effects • touch screen • trackpad	• algorithm • code (computer) • computer command • decompose • import • loop • nested loop • random numbers • remix • script libraries • variable	• input • information • invention • loop • output • photo • program • repetition • screenshot • selection (programming) • sequence • variable • WWW
		Online safety: • anonymity • anti-virus software • digital footprint • digital personality • malware • online reputation • peer-pressure • permission •					

		phishing • privacy settings • report • scammers • screengrab • selfie • software update • two-factor authentications					
	Sticky Knowledge	• A firm understanding of why barcodes and QR codes were created. An ability to create (and scan) their own QR code using a QR code generator website. • Explaining how infrared can be used to transmit a Boolean type signal. • The ability to explain how RFID works, recall a use of RFID chips, type formulas into spreadsheets. • Taking real time data and entering it effectively into a spreadsheet. Presenting the data collected as an answer to a question (Which ride is the best choice for a FastPass?). Recognising the value of analysing real time data. • Complete customer scenarios two and three in the Activity: Customer scenarios.	• Recognising that data can become corrupted within a network and that data sent in packets is more robust, as well as identifying the need to update devices and software. • Recognising differences between mobile data and WiFi and using a spreadsheet to compare and identify high-use data activities and low-use data activities. • Making links between the Internet of Things and Big Data and giving a basic example of how data analysis/analytics can lead to improvement in town	• Explaining that codes can be used for a number of different reasons and decoding messages. • Explaining how to ensure a password is secure and how this works. • -Presenting a simple website with information about Bletchley Park including the need to build electronic thinking machines to solve cipher codes. • Explaining the importance of historical figures and their contribution towards computer science. • Presenting information about their historical	• Explaining how to record sounds and add in sound effects over the top. • Producing a simple radio play with some special effects and simple edits which demonstrates an understanding of how to use the software. • Creating a document which includes correct date information and facts about the computers and how they made a difference. • Demonstrating a clear understanding of their device and how it affected	• generating ideas, testing and changing throughout the lesson and explaining what their program does. • Using nested loops in their designs, explaining why they need two repeats. • -Alter the house drawing using Python commands; using comments to show a level of understanding around what their code does. • Using loops in Python and explaining what the parts of a loop do. • Recognising that computers can	• Evaluating code, understanding what it does.. • I can debug programs and make them more efficient. I can use sequence, selection, repetition or variables within my program • Designing appropriate housing for their product using CAD software, including any input or output devices needed to make it work. • Creating an appealing website for their product, aimed at their target audience which explains what their product is and what it does, using persuasive language. • Creating an edited video of their project, articulating the key benefits. • Being able to describe and show how to search

			planning. • Explaining ways that Big Data or IoT principles could be used to solve a problem or improve efficiency within the school, preparing a presentation about their idea, considering the privacy of some data. • Presenting their ideas about how Big Data/IoT can improve the school and providing feedback to others on their presentations.	figure in an interesting and engaging manner	modern computers, including well researched information with an understanding of the reliability of their sources. • Describing all of the features that we'd expect a computer to have including RAM, ROM, hard drive and processor, but of a higher specification than currently available.	choose random numbers; decomposing the program into an algorithm and modifying a program to personalise it.	for information online and being aware of the accuracy of the results presented. Also, they will be able to understand the difference between fact and opinion.
		Online safety: • The ability to discuss a range of issues online that can leave pupils feeling sad, frightened, worried or uncomfortable and can describe numerous ways to get help. • Explaining how sharing online can have both positive and negative impacts. Being aware of how to seek consent from others before sharing material online and can describe how content can still be shared online even if it is set to private. • -Children explaining what a 'digital reputation' is and what it can consist of. • -Children understand the importance of capturing evidence of online bullying and can demonstrate some of these methods on the devices used at school.					

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		• -Pupils will be able to describe ways to manage passwords and strategies to add extra security such as two factor authentication. Pupils can also explain what to do if passwords are shared, lost, or stolen. • The pupils being able to describe strategies to identify scams. They will be able to explain ways to increase their privacy settings and understand why it is important to keep their software updated.					
	Expert Knowledge	Children should understand how learning can be applied to a real world context. They should select, use and combine a variety of software to design and create a range of programs, systems and content to collect, analyse, evaluate and present data. Children should understand that computer networks provide multiple services. They should understand how barcodes and QR codes work.	Children should select, use and combine a variety of software to design and create a range of programs, systems and content to collect, analyse, evaluate and present data.	Children should understand the importance of secure passwords and using searching and word processing skills to create a presentation. They should use programming software to understand hacking, relating this to computer cracking codes in WWII.	Children should edit sound recordings for specific purposes. They should learn about the history of computers and how they evolved over time.	Children should understand that websites can be altered by exploring the code beneath the site. They should design, write and debug programs that accomplish specific goals. Children should solve problems by decomposing them into smaller parts.	Children should showcase their digital literacy skills. They should demonstrate their computational thinking skills by designing and debugging programs, using different inputs and outputs. Children should understand how search engines work and knowing how to use them safely and effectively.
		Online safety: Children should learn about online reputations and how to go about creating a positive one. They should be aware of the threats that face us online such as scammers and phishing emails and how to identify them.					