

The British School Computing Medium Term Plan

Year	Autumn	Spring	Summer	
R	<u>TOPIC:</u> 1. Me myself and I. 2. Bright Lights and Dark Nights.	<u>TOPIC:</u> 1. A Winter Wonderland. 2. Ready Steady Grow.	<u>TOPIC:</u> 1. Our Special World. 2. Tell Me a Story.	
<p>EARLY YEARS FOUNDATION STAGE</p> <p>While it is not specified in the EYFS, The British School sees Computing and technology as vitally important subjects to deliver to Reception children. Teaching a well-planned Computing curriculum ensures that children enter KS1 with a strong foundation of knowledge, and allows children to develop listening skills, problem-solving abilities and thoughtful questioning as well as improving subject skills across the seven areas of learning. We live in a technological world and there is no escape from the reality that technology is integrated into the lives of young children. We must make sure that they are fluent in computer literacy and all-important e-safety.</p> <p>The Computing objectives for EYFS are to be met through cross-curricular teaching, child-led learning and engagement with Continuous Provision. Through child-led learning we aim to model how to use technology to assist the children in their pursuits and scaffold the learning so that they can reach a deeper understanding. When the children are showing interest in a particular topic, we can encourage this by supporting the children to:</p> <ul style="list-style-type: none"> • Search for images or videos online • Use a safe search engine to find information • Search for and listen to music • Use Google Maps or Earth to explore locations • Type up key topic vocabulary • Use a camera or tablet to take pictures • Use a voice recorder • Integrate mechanical, electrical and technological resources into role play • Play Maths or Literacy games on TopMarks.co.uk, PhonicsPlay.co.uk or other safe websites <p>The children will access the Computing curriculum through the following units. Please see our EYFS Computing Planning document for CP and Adult-led activity ideas.</p>				
Computing Systems and Networks: Using a computer <ul style="list-style-type: none"> • To learn what a keyboard is and how to locate relevant keys. • To learn how to log in and log out. • To understand why we need to log in and out. • To learn what a mouse is and to develop basic mouse skills such as moving and clicking. 		Programming: All about instructions <ul style="list-style-type: none"> • To follow instructions as part of practical activities and games. • To learn to give simple instructions. To learn that an algorithm is a set of instructions to carry out a task, in a specific order. <ul style="list-style-type: none"> • To learn to debug when things go wrong. • To predict the outcome of an algorithm. 	Computing Systems and Networks: Exploring hardware <ul style="list-style-type: none"> • To learn how to explore and tinker with hardware to develop familiarity and introduce relevant vocabulary. • To recognise that a range of technology is used in places such as homes and schools. • To learn how to operate a camera 	Data Handling: Introduction to data <ul style="list-style-type: none"> • To understand how to sort and categorise objects. • To explain how items have been sorted and categorised. • To explore and understand the concept of branch databases. • To understand how to represent data in a pictogram.

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			and/or iPad and use it to take photographs.	<ul style="list-style-type: none"> To understand how to read a simple pictogram. 	
KS1 Year A	NATIONAL CURRICULUM: COMPUTING Pupils should be taught to: <ul style="list-style-type: none"> understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions create and debug simple programs use logical reasoning to predict the behaviour of simple programs use technology purposefully to create, organise, store, manipulate and retrieve digital content recognise common uses of information technology beyond school use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. 				
	<u>Computing systems and networks: Improving mouse skills (2 lessons)</u> Lesson 1: Logging in <ul style="list-style-type: none"> To log in to a computer and access a website. Lesson 2: Click and Drag skills/Drawing Shapes <ul style="list-style-type: none"> To develop mouse skills. To use mouse skills to draw and edit shapes. Key Vocabulary: account, click, ctrl, cursor, drag, drag and drop, digital photograph, drop, duplicate, keyboard, layers, log on/ in, log out/ off, menu, mouse, mouse pointer, password, right click, screen (monitor), software, tool, username	<u>Online Safety: Year 1</u> Lesson 2: Online emotions <ul style="list-style-type: none"> To identify how people's feelings and emotions can be affected by online content. Key Vocabulary: communicate, connect, console, devices, digital footprint, emotion, feelings, instructions, internet, internet safety, laptop, mood, online, personal information, phone, posting, predict, respect, sharing, smart device, smartphone, smart TV, smartwatch, strangers, tablet, trust, wired, wireless	<u>Programming 1: Algorithms unplugged (3 lessons)</u> Lesson 1: What is an algorithm?/Algorithm pictures <ul style="list-style-type: none"> To understand what an algorithm is. To follow instructions precisely to carry out an action. Lesson 2: Step by step <ul style="list-style-type: none"> To understand and be able to explain what decomposition is. Lesson 3: Debugging directions <ul style="list-style-type: none"> To know how to debug an algorithm. Key Vocabulary: algorithm, automatic, bug, chunks, clear, code, debug, decompose,	<u>Creating media: Digital imagery (2 lessons)</u> Lesson 1: Planning a photo story/Taking photos <ul style="list-style-type: none"> To understand and create a sequence of pictures. To take clear photos. Lesson 2: Editing photos <ul style="list-style-type: none"> To edit photos. Key Vocabulary: background, blurred, camera, clear, crop, delete, device, digital camera, download, drag and drop, edit, editing software, filter, image, import, internet, keyword, online, photograph, resize, save as, screen, search engine, sequence, software, storage space, visual effects <u>Online Safety: Year 1</u> Lesson 3: Always be kind and considerate	<u>Programming 2: Bee-bot (Option 2: Virtual Bee-Bot) (3 lessons)</u> Lesson 1: Getting to know a virtual device/Precise instructions <ul style="list-style-type: none"> To explore a new device. To plan and follow a precise set of instructions. Lesson 2: Bee-Bot world virtual <ul style="list-style-type: none"> To program a device. Lesson 3: Bee-Bot adventures <ul style="list-style-type: none"> To create a program that tells a story. Key Vocabulary: algorithm, artificial intelligence, Bee-Bot, clear, code, debug, demonstration, filming,

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	<p><u>Online Safety: Year 1</u> Lesson 1: Using the internet safely</p> <ul style="list-style-type: none"> To recognise what the internet is and how to use it safely. <p>Key Vocabulary: communicate, connect, console, devices, digital footprint, emotion, feelings, instructions, internet, internet safety, laptop, mood, online, personal information, phone, posting, predict, respect, sharing, smart device, smartphone, smart TV, smartwatch, strangers, tablet, trust, wired, wireless</p>		<p>decomposition, device, directions, input, instructions, manageable, motion, order, organise, output, precise, programming, problem, robot, sensor, sequence, solution, specific, steps, tasks, virtual assistant</p> <p><u>Online safety taught through PSHE (Sharing Pictures) and Safer Internet Day</u></p>	<ul style="list-style-type: none"> To recognise how to treat others, both online and in person. <p>Key Vocabulary: communicate, connect, console, devices, digital footprint, emotion, feelings, instructions, internet, internet safety, laptop, mood, online, personal information, phone, posting, predict, respect, sharing, smart device, smartphone, smart TV, smartwatch, strangers, tablet, trust, wired, wireless</p>	<p>inputting, instructions, pause, precise, predict, program, tinker, video, video recording, emulator, virtual</p> <p><u>Online Safety: Year 1</u> Lesson 4: Posting and sharing online</p> <ul style="list-style-type: none"> To recognise the importance of being careful when posting and sharing online. <p>Key Vocabulary: communicate, connect, console, devices, digital footprint, emotion, feelings, instructions, internet, internet safety, laptop, mood, online, personal information, phone, posting, predict, respect, sharing, smart device, smartphone, smart TV, smartwatch, strangers, tablet, trust, wired, wireless</p>	
<p>KS1 Year B</p>	<p>NATIONAL CURRICULUM: COMPUTING</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions create and debug simple programs use logical reasoning to predict the behaviour of simple programs use technology purposefully to create, organise, store, manipulate and retrieve digital content recognise common uses of information technology beyond school use technology safely and respectfully, keeping personal information private; identify where to go for help and support when they have concerns about content or contact on the internet or other online technologies. 					
<p><u>Computing systems and networks 1: What is a computer? (3 lessons)</u> Lesson 1: Computer parts</p>	<p><u>Online Safety: Year 2</u> Lesson 2: How do I keep my things safe online?</p>	<p><u>Programming 1: Algorithms and debugging (3 lessons)</u> Lesson 1: Dinosaur algorithm/Machine learning</p>	<p><u>Data Handling: International Space Station (3 lessons)</u> Lesson 1: Homes in space</p>	<p><u>Programming 2: ScratchJr (3 lessons)</u> Lesson 1: Using ScratchJr/Creating an animation</p>	<p><u>Online Safety: Year 2</u> Lesson 4: Is it true?</p> <ul style="list-style-type: none"> To recognise that not 	

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	<ul style="list-style-type: none"> To recognise the parts of a computer. <p>Lesson 2: Inputs</p> <ul style="list-style-type: none"> To recognise how technology is controlled. <p>Lesson 3: Real-world role play (OPTIONAL)</p> <ul style="list-style-type: none"> To understand the role of computers. <p>Key Vocabulary: battery, buttons, camera, computer, desktop, device, digital, digital recorder, electricity, function, input, invention, keyboard, laptop, monitor, mouse, output, paying till, scanner, screen, system, tablet, technology, video, wires</p> <p><u>Online Safety: Year 2</u></p> <p>Lesson 1: What happens when I post online?</p> <ul style="list-style-type: none"> To decide which information is safe to share online. <p>Key Vocabulary: accept, comment, consent, content, deny, emojis, offline, online, password, permission, personal information, pop-ups, pressure, private information, reliable, share, terms and conditions, trusted adult</p>	<ul style="list-style-type: none"> To practise keeping information safe and private online. <p>Key Vocabulary: accept, comment, consent, content, deny, emojis, offline, online, password, permission, personal information, pop-ups, pressure, private information, reliable, share, terms and conditions, trusted adult</p>	<ul style="list-style-type: none"> To decompose a game to predict the algorithms that are used. To understand that computers can use algorithms to make predictions (machine learning). <p>Lesson 2: Making maps</p> <ul style="list-style-type: none"> To understand what abstraction is. <p>Lesson 3: Unplugged debugging</p> <ul style="list-style-type: none"> To understand what debugging is. <p>Key Vocabulary: abstraction, algorithm, artificial intelligence, bug, clear, correct, data, debug, decompose, error, key features, loop, predict, unnecessary</p> <p><u>Online Safety taught through Safer Internet Day</u></p>	<ul style="list-style-type: none"> To locate features on an interactive map. <p>Lesson 2: Warmer, colder</p> <ul style="list-style-type: none"> To input data in a spreadsheet. <p>Lesson 3: Goldilocks planets</p> <ul style="list-style-type: none"> To retrieve data from a spreadsheet. <p>Key Vocabulary: algorithm, astronaut, data, digital, digital content, experiment, galaxy, insulation, interactive map, International Space Centre, International Space Station, interpret, laboratory, monitor, planet, satellite, sensor, space, temperature, thermometer, water reservoir</p> <p><u>Online safety taught through PSHE (Playing Games)</u></p>	<ul style="list-style-type: none"> To explore a new application. To create an animation. <p>Lesson 2: Programming a joke</p> <ul style="list-style-type: none"> To follow an algorithm. <p>Lesson 3: 'The Three Little Pigs' algorithms</p> <ul style="list-style-type: none"> To plan and use code to create an algorithm. <p>Key Vocabulary: algorithm, animation, blocks, bug, button, CGI, computer code, code (verb), debug, fluid, icon, imitate, instructions, loop, 'on tap', programming, repeat, Scratch JR, sequence, sound recording</p> <p><u>Online Safety: Year 2</u></p> <p>Lesson 3: It's my choice</p> <ul style="list-style-type: none"> To recognise when to deny permission online. <p>Key Vocabulary: accept, comment, consent, content, deny, emojis, offline, online, password, permission, personal information, pop-ups, pressure, private information, reliable, share, terms and conditions, trusted adult</p>	<p>everything online is true.</p> <p>Key Vocabulary: accept, comment, consent, content, deny, emojis, offline, online, password, permission, personal information, pop-ups, pressure, private information, reliable, share, terms and conditions, trusted adult</p>
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<p>LKS2 Year A</p>	<p>NATIONAL CURRICULUM: COMPUTING</p>					
<p>Pupils should be taught to:</p> <ul style="list-style-type: none"> design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts use sequence, selection, and repetition in programs; work with variables and various forms of input and output use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 						
<p><u>Computing systems and networks 1: Networks (3 lessons)</u> Lesson 1: What is a network? <ul style="list-style-type: none"> To recognise what a network is. Lesson 2: How a website works <ul style="list-style-type: none"> To demonstrate how a website works. Lesson 3: What is packet data? <ul style="list-style-type: none"> To identify the role of packet data. Key Vocabulary: cables, component, connection, corrupted, data, desktop, device, DSL (digital subscriber line), fibre, file, internet, laptop, network, network map, network switch, packets, radio waves,</p>	<p><u>Computing systems and networks 3: Journey inside a computer (3 lessons)</u> Lesson 1: Inputs and outputs <ul style="list-style-type: none"> To recognise basic inputs and outputs. Lesson 2: Building a paper laptop <ul style="list-style-type: none"> To identify the components inside a laptop. Lesson 3: Dismantling a tablet <ul style="list-style-type: none"> To decompose a tablet computer. Key Vocabulary: algorithm, assemble, CPU (central processing unit), data, decompose, desktop, disassemble, GPU (graphics processing unit), hard drive,</p>	<p><u>Creating media: Video trailers (Option 2: Using iPads) (3 lessons)</u> Lesson 1: Planning a book trailer <ul style="list-style-type: none"> To plan a book trailer. Lesson 2: Filming <ul style="list-style-type: none"> To take photos or videos that tell a story. Lesson 3: Editing the trailer/ Transitions and text <ul style="list-style-type: none"> To edit a video. To add text and transitions to a video. Key Vocabulary: application, camera angle, clip, edit, film editing software, graphics, import, key events, photo, plan, recording, sound effects, storyboard, time code, trailer, transition, video, voiceover, cross dissolve, fade to black/white , slide, wipe</p>	<p><u>Programming: Scratch (3 lessons)</u> Lesson 1: Tinkering with Scratch/Using loops <ul style="list-style-type: none"> To explore a programming application. To use repetition (a loop) in a program. Lesson 2: Making an animation <ul style="list-style-type: none"> To program an animation. Lesson 3: Programming a game <ul style="list-style-type: none"> To program a game. Key Vocabulary: algorithm, animation, application, code, code block, coding application, debug, decompose, interface, game, loop, predict, program, remixing code, repetition code, review, Scratch, sprite, tinker</p>	<p><u>Online Safety: Year 3</u> Lesson 4: Sharing of information <ul style="list-style-type: none"> To understand the ways personal information can be shared on the internet. Key Vocabulary: accurate, age restricted, autocomplete, beliefs, block, content, digital devices, fact, fake news, internet, opinion, password, persuasive, privacy settings, reliable, report, requests, search engine, security questions, sharing, smart devices, social media platforms, social networking, wellbeing</p>	<p><u>Online Safety: Year 3</u> Lesson 5: Rules of social media platforms <ul style="list-style-type: none"> To understand the rules for social media platforms. Key Vocabulary: accurate, age restricted, autocomplete, beliefs, block, content, digital devices, fact, fake news, internet, opinion, password, persuasive, privacy settings, reliable, report, requests, search engine, security questions, sharing, smart devices, social media platforms, social networking, wellbeing</p>	

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	<p>router, server, submarine cables, tablet, text map, The Cloud, web server, website, website trackers, WiFi, wired, wireless, Wireless Access Points, World Wide Web</p> <p><u>Online Safety: Year 3</u> Lesson 1: Beliefs, opinions and facts on the internet</p> <ul style="list-style-type: none"> To understand how the internet can be used to share beliefs, opinions and facts. <p>Key Vocabulary: accurate, age restricted, autocomplete, beliefs, block, content, digital devices, fact, fake news, internet, opinion, password, persuasive, privacy settings, reliable, report, requests, search engine, security questions, sharing, smart devices, social media platforms, social networking, wellbeing</p>	<p>HDD (hard disk drive), infinite loop, input, keyboard, laptop, memory, microphone, monitor, mouse, output, photocopier, program, QR code, RAM (random access memory), ROM (read only memory), storage, tablet device, technology, touchscreen, touchpad</p> <p><u>Online Safety: Year 3</u> Lesson 2: Who should I ask?</p> <ul style="list-style-type: none"> To explain what should be done before sharing information online. <p>Key Vocabulary: accurate, age restricted, autocomplete, beliefs, block, content, digital devices, fact, fake news, internet, opinion, password, persuasive, privacy settings, reliable, report, requests, search engine, security questions, sharing, smart devices, social media platforms, social networking, wellbeing</p>	<p><u>Online safety taught through PSHE (Super Searcher) and Safer Internet Day</u></p>	<p><u>Online Safety: Year 3</u> Lesson 3: When being online makes me upset</p> <ul style="list-style-type: none"> To identify the effects that the internet can have on people's feelings. <p>Key Vocabulary: accurate, age restricted, autocomplete, beliefs, block, content, digital devices, fact, fake news, internet, opinion, password, persuasive, privacy settings, reliable, report, requests, search engine, security questions, sharing, smart devices, social media platforms, social networking, wellbeing</p>		
<p>LKS2 Year B</p>	<p>NATIONAL CURRICULUM: COMPUTING</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts use sequence, selection, and repetition in programs; work with variables and various forms of input and output use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content 					

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<ul style="list-style-type: none"> select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 					
<p><u>Computing systems and networks: Collaborative learning (Option 2: Microsoft Office 365) (3 lessons)</u></p> <p>Lesson 1: Teamwork</p> <ul style="list-style-type: none"> To understand that software can be used to work online collaboratively. <p>Lesson 2: Microsoft Forms 1/Microsoft Forms 2</p> <ul style="list-style-type: none"> To understand how to create a digital survey. To create and share a Microsoft Form. <p>Lesson 3: Shared spreadsheets</p> <ul style="list-style-type: none"> To analyse data. <p>Key Vocabulary: animations, average, bar chart, collaboration, comment, conditional formatting, contribution, data, edited, email account, format, freeze, icon, images, insert, link, multiple choice, numerical data, pie chart, presentations, resolved, reviewing comments, share, slides, software,</p>	<p><u>Programming 1 Further coding with Scratch (3 lessons)</u></p> <p>Lesson 1: Scratch reminder/Identifying what code does</p> <ul style="list-style-type: none"> To recall the key features of Scratch. To understand how a Scratch game works by using decomposition to identify key features. <p>Lesson 2: Introduction to variables</p> <ul style="list-style-type: none"> To recognise what a variable is. <p>Lesson 3: Making a variable</p> <ul style="list-style-type: none"> To understand how to make a variable in Scratch. <p>Key Vocabulary: broadcast block, code blocks, conditional, coordinates, decomposition, features, game, information, negative numbers, orientation, parameters, position, program, project, script, sprite, stage, tinker, variables</p>	<p><u>Data Handling: Investigating weather (3 lessons)</u></p> <p>Lesson 1: What is the weather?</p> <ul style="list-style-type: none"> To log data taken from online sources in a spreadsheet. <p>Lesson 2: Extreme weather</p> <ul style="list-style-type: none"> To design an automated machine to respond to sensor data. <p>Lesson 3: Satellites and forecasts</p> <ul style="list-style-type: none"> To understand how weather forecasts are made. <p>Key Vocabulary: accurate, backdrop, climate zone, cold, collaboration, condensation, cylinder, degrees, evaporation, extreme weather, forecast, heat sensor, lightning, measurement, pinwheel, presenter, rain, satellite, script, sensitive, sensor data, solar panel, tablet/digital camera, temperature, thermometer, tornado, warm, weather, weather forecast, wind</p> <p><u>Online safety taught through PSHE (Picture Wise) and Safer Internet Day</u></p>	<p><u>Programming 2: Computational thinking (3 lessons)</u></p> <p>Lesson 1: What is computational thinking?/Decomposition</p> <ul style="list-style-type: none"> To understand that computational thinking is made up of four key strands. To understand what decomposition is and how to apply it to solve problems. <p>Lesson 2: Abstraction and pattern recognition</p> <ul style="list-style-type: none"> To understand what pattern recognition and abstraction mean. <p>Lesson 3: Algorithm design</p> <ul style="list-style-type: none"> To understand how to create an algorithm and what it can be used for. <p>Key Vocabulary: abstraction, algorithm, code, computational thinking, decomposition, input, logical reasoning, output, pattern recognition, script, sequence, variable</p>	<p><u>Online Safety: Year 4</u></p> <p>Lesson 3: Fact, opinion or belief?</p> <ul style="list-style-type: none"> To explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true. <p>Key Vocabulary: accuracy, advantages, advertisements, belief, bot, chatbot, computer, distractions, fact, hashtag, implications, in-app purchases, influencer, opinion, program, recommendations, reliable, risks, screen time, search results, snippets, sponsored, trustworthy</p>	<p><u>Online Safety: Year 4</u></p> <p>Lesson 4: What is a bot?</p> <ul style="list-style-type: none"> To explain that technology can be designed to act like or impersonate living things. <p>Key Vocabulary: accuracy, advantages, advertisements, belief, bot, chatbot, computer, distractions, fact, hashtag, implications, in-app purchases, influencer, opinion, program, recommendations, reliable, risks, screen time, search results, snippets, sponsored, trustworthy</p>

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	<p>spreadsheets, suggestions, survey, teamwork, themes, transitions</p> <p><u>Online Safety: Year 4</u> Lesson 1: What happens when I search online?</p> <ul style="list-style-type: none"> To describe how to search for information within a wide group of technologies and make a judgement about the probable accuracy. <p>Key Vocabulary: accuracy, advantages, advertisements, belief, bot, chatbot, computer, distractions, fact, hashtag, implications, in-app purchases, influencer, opinion, program, recommendations, reliable, risks, screen time, search results, snippets, sponsored, trustworthy</p>	<p><u>Online Safety: Year 4</u> Lesson 2: How do companies encourage us to buy online?</p> <ul style="list-style-type: none"> To describe some of the methods used to encourage people to buy things online. <p>Key Vocabulary: accuracy, advantages, advertisements, belief, bot, chatbot, computer, distractions, fact, hashtag, implications, in-app purchases, influencer, opinion, program, recommendations, reliable, risks, screen time, search results, snippets, sponsored, trustworthy</p>		<p><u>Online safety taught through PSHE (In the News!)</u></p>		
<p>UKS2 Year A</p>	<p>NATIONAL CURRICULUM: COMPUTING</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts use sequence, selection, and repetition in programs; work with variables and various forms of input and output use logical reasoning to explain how some algorithms work and to detect and correct errors in algorithms and programs understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information 					

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<ul style="list-style-type: none"> use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 					
<p><u>Computing systems and Networks: Search engines (3 lessons)</u></p> <p>Lesson 1: Searching basics/Inaccurate information</p> <ul style="list-style-type: none"> To understand what a search engine is and how to use it. To be aware that not everything online is true. <p>Lesson 2: Web quest</p> <ul style="list-style-type: none"> To search effectively. <p>Lesson 3: Information poster</p> <ul style="list-style-type: none"> To create an informative poster. <p>Key Vocabulary: algorithm, appropriate, copyright, correct, credit, data leak, deceive, fair, fake, inappropriate, incorrect, index, information, keywords, network, privacy, rank, real, search engine, TASK, web crawler, website</p> <p><u>Online Safety: Year 5</u></p> <p>Lesson 1: Online protection</p> <ul style="list-style-type: none"> To understand how apps can access personal 	<p><u>Data Handling: Mars Rover 1 (3 lessons)</u></p> <p>Lesson 1: Mars Rover</p> <ul style="list-style-type: none"> To identify how and why data is collected from space. <p>Lesson 2: Binary code</p> <ul style="list-style-type: none"> To read and calculate numbers using binary code. <p>Lesson 3: Using binary – numbers</p> <ul style="list-style-type: none"> To use simple operations to calculate bit patterns. <p>Key Vocabulary: 8-bit binary, addition, ASCII, binary code, boolean, byte, communicate, construction, CPU, data transmission, decimal numbers, design, discovery, distance, hexadecimal, input, instructions, internet, Mars Rover, moon, numerical data, output, planet, radio signal, RAM, research, scientist, sequence, signal, simulation, space, subtraction, technology, transmit</p> <p><u>Online Safety: Year 5</u></p> <p>Lesson 2: Online communication/Online Reputation</p>	<p><u>Creating media: Stop motion animation (Option 1: Stop Motion Studio) (3 lessons)</u></p> <p>Lesson 1: Animation explored/Exploring stop-motion</p> <ul style="list-style-type: none"> To understand what animation is. To understand what stop motion animation is. <p>Lesson 2: Planning my stop-motion project</p> <ul style="list-style-type: none"> To plan a stop motion video. <p>Lesson 3: Stop motion creation</p> <ul style="list-style-type: none"> To create a stop motion animation. <p>Key Vocabulary: animation, animator, background, character, decomposition, design, edit, evaluate, flip book, fluid movement, frame, model, moving images, still image, storyboard, thaumatrope, zoetrope, digital device, onion skinning, stop motion</p> <p><u>Online Safety taught through PSHE (Play, Like, Share) and Safer Internet Day</u></p>	<p><u>Programming: Programming music (Option 2: Scratch) (3 lessons)</u></p> <p>Lesson 1: Tinkering with Scratch music elements/ Scratch soundtracks</p> <ul style="list-style-type: none"> To tinker with Scratch music elements. To create a program that plays themed music. <p>Lesson 2: Planning a soundtrack</p> <ul style="list-style-type: none"> To plan a soundtrack program. <p>Lesson 3: Programming a soundtrack</p> <ul style="list-style-type: none"> To program a soundtrack. <p>Key Vocabulary: beat, bugs, coding, command, debug, decompose, error, instructions, loop, melody, mindmap, music, output, performance, pitch, play, predict, programming, rhythm, tempo, timbre, tinker, tutorials, typing, plan, repeat, scratch, soundtrack, spacing</p> <p><u>Online Safety taught through PSHE (Fact or Opinion?)</u></p>	<p><u>Online Safety: Year 5</u></p> <p>Lesson 3: Online bullying</p> <ul style="list-style-type: none"> To discover ways to overcome bullying. <p>Key Vocabulary: accurate information, advice, app permissions, application, apps, bullying, communication, emojis, health, in-app purchases, information, judgement, memes, mental health, mindfulness, mini-biography, online communication, opinion, organisation, password, personal information, positive contributions, private information, real world, strong password, summarise, support, technology, trusted adult, wellbeing</p>	<p><u>Online Safety: Year 5</u></p> <p>Lesson 4: Online health</p> <ul style="list-style-type: none"> To understand how technology can affect health and wellbeing. <p>Key Vocabulary: accurate information, advice, app permissions, application, apps, bullying, communication, emojis, health, in-app purchases, information, judgement, memes, mental health, mindfulness, mini-biography, online communication, opinion, organisation, password, personal information, positive contributions, private information, real world, strong password, summarise, support, technology, trusted adult, wellbeing</p>

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	<p>information and how to alter the permissions.</p> <p>Key Vocabulary: accurate information, advice, app permissions, application, apps, bullying, communication, emojis, health, in-app purchases, information, judgement, memes, mental health, mindfulness, mini-biography, online communication, opinion, organisation, password, personal information, positive contributions, private information, real world, strong password, summarise, support, technology, trusted adult, wellbeing</p>	<ul style="list-style-type: none"> • To be aware of the positive and negative aspects of online communication. • To understand how online information can be used to form judgements. <p>Key Vocabulary: accurate information, advice, app permissions, application, apps, bullying, communication, emojis, health, in-app purchases, information, judgement, memes, mental health, mindfulness, mini-biography, online communication, opinion, organisation, password, personal information, positive contributions, private information, real world, strong password, summarise, support, technology, trusted adult, wellbeing</p>				
<p>UKS2 Year B</p>	<p>NATIONAL CURRICULUM: COMPUTING</p> <p>Pupils should be taught to:</p> <ul style="list-style-type: none"> • design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts • use sequence, selection, and repetition in programs; work with variables and various forms of input and output • use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs • understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration • use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content • select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information 					

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<ul style="list-style-type: none"> use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact. 					
<p><u>Computing systems and Networks: Bletchley Park (3 lessons)</u></p> <p>Lesson 1: Secret codes/Brute Force Hacking</p> <ul style="list-style-type: none"> To understand there are many different types of secret codes. To understand the importance of having a secure password. <p>Lesson 2: Bletchley Park</p> <ul style="list-style-type: none"> To understand the importance of Bletchley Park to the World War II war effort. <p>Lesson 3: Computing heroes (OPTIONAL)</p> <ul style="list-style-type: none"> To research historical figures that contributed to technological advances in computing. <p>Key Vocabulary: acrostic code, brute force hacking, caesar cipher, chip and pin system, cipher, code, combination, contribute, convince, date shift cipher, discovery, hero, invention,</p>	<p><u>Data Handling: Big data 1 (3 lessons)</u></p> <p>Lesson 1: Barcodes</p> <ul style="list-style-type: none"> To identify how barcodes and QR codes work. <p>Lesson 2: RFID/Using RFID</p> <ul style="list-style-type: none"> To recognise how RFID is used. To input and analyse real-world data. <p>Lesson 3: Transport data</p> <ul style="list-style-type: none"> To analyse and evaluate data. <p>Key Vocabulary: algorithms, barcode, binary, Boolean, brand, chips, commuter, contactless, data, encrypted, infrared, MagicBand, privacy, proximity, QR code, QR scanner, radio waves, RFID, signal, systems/data analyst, transmission, wireless</p> <p><u>Online Safety: Year 6</u></p> <p>Lesson 2: Sharing online/Creating a positive online reputation</p> <ul style="list-style-type: none"> To explore the impact and consequences of sharing online. To know how to create a 	<p><u>Creating media: History of computers (3 lessons)</u></p> <p>Lesson 1: First computers</p> <ul style="list-style-type: none"> To understand how computers have changed and the impact this has had on the modern world. <p>Lesson 2: Computers that changed the world</p> <ul style="list-style-type: none"> To research one of the computers that changed the world and present information about it to the class. <p>Lesson 3: Future computer</p> <ul style="list-style-type: none"> To design a computer of the future. <p>Key Vocabulary: background noise, byte, computer, devices, file, FX, gigabyte, graphics, hard drive, hardware, kilobytes, megabyte, memory storage, mouse, operating system, overlay, play, processor, radio play, RAM, Raspberry Pi, record, reverb, ROM, script, smartphone, sound, sound effects, terrabytes, touch screen, track, trackpad, trailer</p> <p><u>Online Safety taught through PSHE (Think Before You Click!) and Safer Internet Day</u></p>	<p><u>Computing Systems and Networks – Exploring AI (3 lessons)</u></p> <p>Lesson 1: What is AI?</p> <ul style="list-style-type: none"> To explore the basics of AI. <p>Lesson 2: AI and text</p> <ul style="list-style-type: none"> To recognise how AI processes and responds to text. <p>Lesson 3: AI through images.</p> <ul style="list-style-type: none"> To recognise how AI can be used to explore and generate images <p>Lesson 4: AI Coding</p> <ul style="list-style-type: none"> To apply AI generated HTML code to the website Trinket. <p>Key Vocabulary: AI, AI-generated image, AI-generated text, algorithm, applications, authenticity, code, considerations, debate, ethical, fake, generate, HTML, implications, instructions, modify, output, prompt, refine, response, trained</p> <p><u>Online safety taught through PSHE (Fakebook Friends)</u></p>	<p><u>Online safety: Year 6</u></p> <p>Lesson 3: Capturing evidence</p> <ul style="list-style-type: none"> To describe how to capture bullying content as evidence. <p>Key Vocabulary: anonymity, antivirus, biometrics, block and report, consent, copy, digital footprint, digital personality, financial information, hacking, inappropriate, malware, online bullying, online reputation, password, paste, personal information, personality, phishing, privacy settings, private, reliable source, report, reputation, respect, scammers, screengrab, secure, settings, software updates, two factor authentication, URL, username</p>	<p><u>Online safety: Year 6</u></p> <p>Lesson 4: Think before you click</p> <ul style="list-style-type: none"> To be aware of strategies that help protect people online. <p>Key Vocabulary: anonymity, antivirus, biometrics, block and report, consent, copy, digital footprint, digital personality, financial information, hacking, inappropriate, malware, online bullying, online reputation, password, paste, personal information, personality, phishing, privacy settings, private, reliable source, report, reputation, respect, scammers, screengrab, secure, settings, software updates, two factor authentication, URL, username</p> <p><u>Online safety taught through PSHE (Media Manipulation/Pressure Online)</u></p>

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	<p>Nth Letter Cipher, password, Pig Latin, Pigpen cipher, present, scrambled, secret, secure, technological advancement, trial and error</p> <p><u>Online Safety: Year 6</u> Lesson 1: Life online</p> <ul style="list-style-type: none"> To describe online issues that give us negative feelings and know how to get help. <p>Key Vocabulary: anonymity, antivirus, biometrics, block and report, consent, copy, digital footprint, digital personality, financial information, hacking, inappropriate, malware, online bullying, online reputation, password, paste, personal information, personality, phishing, privacy settings, private, reliable source, report, reputation, respect, scammers, screengrab, secure, settings, software updates, two factor authentication, URL, username</p>	<p>positive online reputation.</p> <p>Key Vocabulary: anonymity, antivirus, biometrics, block and report, consent, copy, digital footprint, digital personality, financial information, hacking, inappropriate, malware, online bullying, online reputation, password, paste, personal information, personality, phishing, privacy settings, private, reliable source, report, reputation, respect, scammers, screengrab, secure, settings, software updates, two factor authentication, URL, username</p>				
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