Meridian Computing Curriculum

Intent:
Our aim is for all pupils to become responsible, competent, confident and creative users of technology, developing the skills and curiosity to become lifelong learners, in line with our whole-school vision. We want to equip pupils with the knowledge and understanding to use technology purposefully, safely and confidently, both now and in the future.

Online safety is a continuous golden thread throughout the curriculum, with pupils regularly revisiting privacy, digital footprints, respectful communication, reliability of information and knowing how to seek help. As technology evolves, pupils develop an age-appropriate understanding of Artificial Intelligence (AI), learning how it works, its opportunities and limitations, and how to use it safely, critically and responsibly.

Our curriculum is carefully sequenced and delivered primarily through Purple Mash, developing knowledge and skills across three key areas:

- **Computer Science** – algorithms, sequencing, programming and debugging (e.g. 2Code, 2Logo).
- **Information Technology** – collecting, analysing and presenting data and digital media (e.g. 2Calculate, 2Question, 2Paint, 2Publish).
- **Digital Literacy** – safe communication, effective research and responsible content creation (e.g. 2Email, 2Blog).

Regular revisiting secures knowledge, increases challenge and supports meaningful cross-curricular links. Explicit vocabulary, scaffolding and opportunities for challenge ensure all learners, including those with SEND, can access and succeed. Through practical, purposeful projects, pupils develop problem-solving, creativity and critical thinking, preparing them to adapt to an ever-changing digital world and continue learning throughout their lives.

Reception

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Using Technology Safely and Respectfully	**Technology All Around Us**	**Exploring Digital Devices**	**Understanding Instructions**	**Exploring Programmable Toys (e.g., Bee-Bots)**	**Creating with Technology**
Understand that devices should be used with adult permission and support. Talk about safe use in simple terms (e.g., telling an adult if something goes wrong).	Begin to notice and talk about technology in everyday life (e.g., phones, microwaves, traffic lights). Recognise that devices (like iPads, Bee-Bots, and computers) can be used to play, learn, and communicate.	Explore using devices such as iPads, interactive whiteboards, and talking books. Understand simple interactions: open an app, take a photo, listen to audio, watch a video.	Understand and follow simple verbal and visual instructions. Begin to sequence actions in order (early algorithmic thinking).	Begin to control programmable toys through simple commands. Understand directional language and basic sequencing (e.g., forward, back).	Use simple tools on digital platforms to draw or create content. Begin to talk about what they have made and how they used the device.
Online Safety Understand that devices should be used with adult permission and support. Know to tell a trusted adult if something goes wrong or makes them feel unsure.		**Online Safety** Understand that technology needs clear instructions and that they should ask an adult for help before following unfamiliar instructions on a device		**Online Safety** Understand the importance of asking permission before taking or sharing photographs, videos or recordings of others	
KEY VOCABULARY					
Safe Kind Ask Help Permission Trusted adult	Technology Device Screen Click Tap Power on/off	App Tablet Swipe Photo Video Sound Touch	Instructions Steps Order Start Stop Next	Forwards Backwards Turn Go Stop Robot Command Program	Draw Colour Tool Save Open Screen Mouse Tablet

Year 1

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Online Safety & Exploring Purple Mash	**Grouping & Sorting (2Quiz, 2Count):**	**Pictograms (2Count, 2Graph)**	**Electrical Systems: Simple Circuits in DT (e.g., Torch or Light-Up Poster)**	**Animated Story Books (2Create a Story)**	**Coding with 2Code (Simple Commands)**
Understand how to use technology safely and respectfully. Know what personal information is and why it must be kept private. Begin to navigate Purple Mash and understand how to save and retrieve work. Recognise trusted adults to speak to when feeling unsure online.	Use software to sort items based on different criteria (e.g., colour, shape). Understand how digital tools can help us group and classify. Begin to use basic drag-and-drop and selection tools on-screen.	Collect simple data and present it using pictograms. Learn how to use graphing tools to represent information. Compare quantities and draw conclusions from visual data.	Incorporate a simple circuit into a product using wires, batteries, and bulbs. Understand the difference between input and output components. Design products with a clear purpose and link to Science learning. Build safely using components and test for faults.	Create a simple story using text, sound, and images. Begin to use technology for creating and communicating ideas. Understand how to add multiple pages and save digital work.	Use simple commands to control characters on screen. Create short programs using a start block and movement. Begin to debug simple mistakes when programs don't work. Understand that computers follow precise instructions.
Online Safety: Understand what personal information is, why passwords should be kept private and how to ask a trusted adult for help when using online platforms	**Online Safety:** Understand that information and images found online belong to someone and should be used respectfully. Recognise that not everything online is suitable for children.	**Online Safety:** Understand that photographs and information about people should only be collected or shared with permission.	**Online Safety:** Understand the importance of using electrical and digital equipment safely, following instructions and asking an adult before connecting or using unfamiliar devices	**Online Safety:** Understand that images, sounds and words used in digital stories should be appropriate and respectful. Ask permission before using or sharing photographs of others.	**Online Safety:** Understand that computers follow instructions and that they should only use programmes and follow instructions from trusted sources. Tell an adult if something unexpected happens online.
KEY VOCABULARY					
Login, log off, personal information, safe, internet, username, password, save, open, online	Sort, group, category, same, different, icon, click, drag, drop.	Data, chart, pictogram, graph,	Circuit, switch, wire, bulb, battery, input, output, connection, insulate, component, flow.	Page, animation, sound, type, write, story, image, save, next, back, book, characters.	Code, program, instruction, action, bug, debug, character, move

Year 2

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Online Safety & Exploring Purple Mash (2Connect, 2Publish)	**Coding with 2Code (Simple Algorithms & Debugging)**	**Spreadsheets (2Calculate)**	**Questioning (2Question, 2Investigate – Binary Trees & Databases)**	**Presenting Ideas (2Create a Story, 2Quiz, 2Connect)**	**Effective Searching & Email (2Email)**
Know how to stay safe online and who to speak to when unsure. Understand the importance of keeping personal information private. Learn how to use Purple Mash tools to create, save, and open files. Begin organising digital work (e.g., into folders or with file names).	Understand what algorithms are and how they are used to program a computer. Create, test, and debug simple programs using blocks of code. Use commands like movement and speech in sequences. Begin to predict the outcome of simple programs.	Understand how data can be represented in tables and cells. Enter and edit data in a spreadsheet. Use simple formulae like addition and count. Use spreadsheet tools to answer questions and solve simple problems.	Create and use binary trees to sort and identify items based on yes/no questions. Use simple databases to record and retrieve information. Ask and answer yes/no questions to explore logical sorting.	Create and present digital content using different tools (e.g., storybooks, quizzes, concept maps). Use audio, images, and text to share information or ideas. Choose appropriate software for the task. Explore different ways to present ideas to others.	Understand how to use search engines and databases safely and effectively. Use key words to find information online. Learn how to open, read, and reply to emails within a safe environment (internal 2Email). Understand email etiquette and the importance of online respect.
Online Safety: Understand how to create and protect passwords, keep personal information private and organise digital work securely	**Online Safety:** Understand that online games and interactive programmes should be used responsibly. Recognise that online interactions should always be kind and respectful	**Online Safety:** Understand that personal information can be collected and stored digitally. Recognise why information about themselves and others should be kept private.	**Online Safety:** Understand that information gathered through digital searches and databases may not always be accurate. Begin to check information with trusted adults	**Online Safety:** Understand the importance of asking permission before using or sharing other people's photographs, ideas or work. Recognise the importance of acknowledging sources.	**Online Safety:** Understand how to search safely using appropriate keywords, recognise suspicious messages and communicate respectfully through email. Know how to report or seek help with inappropriate messages.
KEY VOCABULARY					
Internet, online, safety, personal information, password, log in, log out, save, open, folder, trusted adult.	Code, command, instruction, sequence, algorithm, program, bug, debug, predict, run, outcome.	Spreadsheet, cell, row, column, data, formula, total, count, chart, sum.	Question, data, database, record, binary tree, sort, yes/no, information, search, field.	Present, software, text, image, sound, record, organise, story, quiz, map, animation	Search engine, keyword, email, inbox, send, reply, attach, respect, information, internet, address.

Year 3

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Online Safety & Digital Communication (2Connect, 2Email)	**Coding with 2Code (Sequence, Repetition & Events)**	**Spreadsheets (2Calculate)**	**Touch Typing (2Type)**	**Branching Databases (2Question)**	**Simulations & Graphing (2Simulate, 2Graph)**
Understand the importance of strong passwords and keeping information private. Recognise behaviours that are kind and respectful online. Learn how to send and reply to emails using 2Email in a controlled setting. Understand how emails can include attachments and communicate clearly.	Develop more complex coding skills using 2Code. Use sequencing and repetition blocks to build a working program. Introduce event-driven programming (e.g., when clicked). Begin to test and debug code independently.	Enter and format data in a spreadsheet. Use tools like totals, counting, and creating charts or graphs. Begin to use spreadsheets to solve real-world problems (e.g., budgeting or surveys). Introduce basic formulae.	Understand the correct hand positioning for efficient typing. Begin to build speed and accuracy using touch typing software. Know how to edit text using backspace, delete, caps lock, and space bar. Develop familiarity with keyboard layout and functions.	Create branching databases using yes/no questions. Understand how to organise information and sort items logically. Apply database tools to classify and group information. Reflect on how digital tools help us make decisions efficiently.	Explore and discuss the uses of simulations (e.g., weather, emergencies). Understand that simulations are models of real-life scenarios. Use 2Graph to collect and represent data in different graph types. Compare different formats (bar chart, line graph, pictogram).
Online Safety: Understand how to create strong passwords, protect personal information and communicate respectfully. Recognise that emails can be shared or forwarded and contribute to a lasting digital footprint.	**Online Safety:** Understand that AI can be used to generate instructions, text and images. Recognise that AI-generated information may contain mistakes and should be checked rather than automatically trusted.	**Online Safety:** Understand how personal data can be collected, stored and presented digitally. Recognise the importance of only using and sharing data appropriately and with permission.	**Online Safety:** Understand that anything typed online should be appropriate and respectful. Recognise the importance of protecting personal information when entering text into websites or digital platforms.	**Online Safety:** Understand that questions used to collect information should be appropriate and respectful. Recognise that personal information about others should not be collected or shared without permission.	**Online Safety:** Understand that simulations and digital graphs represent information but may not always show the complete picture. Use AI tools with adult guidance, avoid sharing personal information and check AI-generated information against reliable sources.
KEY VOCABULARY					
Internet, password, email, sender, recipient, inbox, attachment, respectful, online, digital footprint.	Sequence, repetition, loop, event, command, bug, debug, program, action, input, output.	Spreadsheet, cell, row, column, chart, graph, formula, data, total, calculate.	Hotkeys, type, shift, caps lock, backspace, space bar, punctuation, accuracy, speed.	Database, branching, binary, question, sort, classify, field, information, criteria, answer.	Simulation, model, predict, graph, bar chart, line graph, pictogram, data, outcome, analyse.

Year 4

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Online Safety & Digital Literacy (2Connect, 2Email)	Coding with 2Code (Repetition, Conditions & Variables)	Spreadsheets (2Calculate)	Writing for Different Audiences (2Publish, 2Email, 2Connect)	Logo Programming (2Logo)	Animation (2Animate)
Recognise the importance of secure passwords and how to manage them. Understand the impact of online behaviour, including cyberbullying and respectful communication. Know how to report concerns and seek help online. Use 2Email to practice safe and purposeful communication.	Understand how to use loops, repetition, and conditions in a program. Introduce and manipulate variables within code (e.g., score). Use logical reasoning to predict outcomes and debug programs. Build simple games or animations using block-based code.	Use spreadsheets for calculations, comparisons, and data handling. Introduce more complex formulae (e.g., multiplication and averages). Solve maths-based problems using spreadsheets. Understand how to graph results and interpret data.	Use different digital tools to create content for specific audiences (e.g., newspaper, blog, presentation). Understand how layout and formatting affects clarity and impact. Use 2Connect to plan and organise writing ideas digitally. Edit and improve work based on peer feedback or purpose.	Use text-based programming commands to control an onscreen turtle. Understand how to create shapes using repeat loops and accurate angles. Develop sequencing and debugging skills in a new programming environment. Translate visual outcomes into algorithmic commands.	Create frame-by-frame animations to tell a story or explain a concept. Understand the difference between stop-motion and digital animation. Plan and structure animations using a storyboard approach. Combine images, text, and movement to produce engaging digital work.
Online Safety: Understand how to protect personal data, manage privacy settings and recognise the impact of online behaviour, including cyberbullying. Know how to report concerns and seek support.	**Online Safety:** Understand that AI can generate code, text and other content but may produce errors or biased results. Begin to question AI-generated information and test whether it is correct before using it.	**Online Safety:** Understand how digital services collect and use data. Recognise the importance of protecting personal information and considering who might have access to information stored online.	**Online Safety:** Understand how to communicate appropriately with different audiences online. Recognise copyright, plagiarism and the importance of gaining consent before sharing other people's content.	**Online Safety:** Understand that online instructions, tutorials and code examples should come from trusted sources. Recognise that information and instructions found online may need checking before being followed.	**Online Safety:** Understand the importance of consent when creating animations involving other people or their images. Recognise that digital images and videos can be edited or manipulated and may not always show real events accurately.
KEY VOCABULARY					
Secure, password, privacy, cyberbullying, digital footprint, email, attachment, report, online safety, communication.	Loop, repetition, condition, variable, input, output, event, command, algorithm, debug, if/then.	Spreadsheet, formula, average, multiplication, chart, calculate, cell, value, sum, function.	Audience, format, purpose, edit, layout, headline, paragraph, hyperlink, publish, digital content.	Command, sequence, procedure, repeat, angle, direction, pen up/down, debug, turtle.	Frame, sequence, animate, motion, transition, storyboard, loop, play, timeline, scene.

Year 5

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Online Safety & Digital Wellbeing	**Coding with 2Code (Variables, Inputs, Outputs)**	**Spreadsheets and Data Handling**	**Creating Media Video Editing and Presentation**	**Networks and the Internet**	**Robotics and Control Technology**
Deepen understanding of online safety, including data privacy and digital citizenship. Learn about managing online identity and reputation. Recognise and respond appropriately to cyberbullying. Understand how to use social media responsibly (age-appropriate context).	Use variables to store and manipulate data within programs. Work with input and output commands to make interactive programs. Create and debug games or simulations using conditions and loops. Develop logical thinking to solve complex problems.	Use spreadsheets to organize, calculate, and analyse data. Apply formulae including averages, percentages, and complex calculations. Create graphs and charts to present data visually. Understand data accuracy and validation.	Use digital video tools to plan, capture, and edit video content. Learn about video sequencing, trimming, and adding effects. Understand copyright and ethical use of media. Present information clearly using multimedia tools.	Understand the basics of computer networks and the internet. Explore how data is transferred and shared online. Learn about the role of servers, clients, IP addresses, and browsers. Discuss the importance of online safety within networked environments.	Program simple robots or control systems using block-based coding. Understand how sensors and motors are controlled via software. Design and test robotic movements for specific tasks. Reflect on programming success and troubleshoot issues.
Online Safety: Understand how to manage online identity and reputation, protect personal data and respond appropriately to cyberbullying. Explore the impact of online behaviour and responsible social media use.	**Online Safety:** Understand how AI can generate content and influence online experiences. Recognise AI-generated misinformation, bias and deepfakes, and develop strategies for checking the reliability of information.	**Online Safety:** Understand how organisations collect, store and analyse personal data. Explore data tracking, privacy settings and the importance of making informed decisions about sharing information.	**Online Safety:** Understand copyright, consent and responsible content sharing. Recognise how images, videos and audio can be manipulated and the importance of identifying edited or misleading media.	**Online Safety:** Understand online security risks, including phishing, scams and malicious links. Recognise how information travels across networks and develop strategies for protecting personal data and devices.	**Online Safety:** Understand that automated systems and AI can make decisions based on programmed instructions and data. Consider why human judgement, testing and responsible use are important when using automated technology.
KEY VOCABULARY					
Privacy settings, digital footprint, cyberbullying, identity, reputation, password, consent, social media, safe, report.	Variable, input, output, condition, loop, algorithm, debug, event, command, interactive.	Spreadsheet, formula, average, percentage, graph, chart, data validation, cell, calculate, total.	Video editing, sequence, trim, effect, copyright, media, presentation, storyboard, audio, clip.	Network, internet, server, client, IP address, browser, data, upload, download, security.	Robot, sensor, motor, program, control, debug, input, output, command, algorithm.

Year 6

Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Online Safety & Responsible Digital Citizenship	**Advanced Coding with 2Code (Functions, Inputs, and Outputs)**	**Data and Spreadsheets**	**Creating and Editing Digital Media**	**Networks, the Internet, and Cyber Security**	**Programming and Robotics Project**
Understand complex aspects of online safety including privacy, digital footprint, and data protection. Learn how to critically evaluate online content and recognise misinformation. Explore the ethical use of technology and respectful online behaviour. Know how to report concerns and support peers in digital environments.	Develop programs using advanced coding concepts such as functions and procedures. Use inputs from users and sensors to control program flow. Incorporate sound, images, and interactivity into projects. Debug complex code and optimize performance.	Use spreadsheets for advanced data analysis including complex formulae and functions. Create and interpret charts to represent data effectively. Use data validation and conditional formatting to improve data accuracy. Apply spreadsheets to real-life problems (e.g., budgeting, statistical analysis).	Plan and produce multi-media presentations and digital content for specific audiences. Use video editing software to combine video, audio, text, and images effectively. Understand and apply principles of copyright and fair use. Critique and improve digital content based on feedback.	Understand how computer networks work, including the internet and intranets. Explore data transmission, IP addressing, and website hosting basics. Learn about cyber security threats and how to protect devices and data. Discuss the impact of technology on society and privacy concerns.	Design, program, and test a complex robot or automated system using block-based or text-based coding. Incorporate sensors and inputs to make autonomous decisions. Work collaboratively to plan and troubleshoot programming challenges. Evaluate the success of the project and reflect on learning.
Online Safety: Critically evaluate digital identity, privacy, consent and digital footprints. Understand how online behaviour affects personal reputation and the wellbeing of others.	**Online Safety:** Critically evaluate AI-generated content, including code and other outputs. Understand that AI can produce inaccurate or biased results and learn to verify, test and take responsibility for any AI-assisted work.	**Online Safety:** Understand how organisations collect, analyse and use personal data, including profiling and tracking. Evaluate the importance of data protection, privacy settings and informed consent.	**Online Safety:** Understand the ethical and legal responsibilities involved in creating and sharing digital content. Explore copyright, plagiarism, consent and the responsible use of AI-generated images, audio and video.	**Online Safety:** Recognise and evaluate online threats, including phishing, scams, malware and social engineering. Understand strategies for protecting personal information, accounts and devices.	**Online Safety:** Evaluate the ethical implications of AI and automated technologies, including bias, privacy and accountability. Understand the importance of responsible AI use, human oversight and critical thinking when developing and using technology.
KEY VOCABULARY					
Digital footprint, privacy, misinformation, copyright, plagiarism, ethical, data protection, cyberbullying, report, consent. Formula, function,	Function, procedure, input, output, parameter, variable, loop, conditional, debug, algorithm, event.	conditional formatting, data validation, chart, graph, pivot table, analyse, calculate, range.	Multimedia, editing, storyboard, copyright, fair use, timeline, transition, layer, audio, video.	Network, internet, IP address, server, client, firewall, encryption, cyber security, phishing, malware	Robotics, sensor, actuator, autonomous, algorithm, debug, input, output, control system, collaboration.