Computing
Year 3/4

Term 1.1
Computing systems and networks 1: Networks and the internet

Vocab	Knowledge	Outcomes
Cables Component Connection Corrupted Data Desktop Device DSL Fibre File Internet Laptop Network Network map Network switch Packets Radio waves Router Server Submarine cables Tablet Text map The Cloud Web server Website Website trackers WiFi	To understand what a network is and how a school network might be organised. To know that a server is central to a network and responds to requests made. To know that a router connects us to the internet. To know how the internet uses networks to share files. To know what a packet is and why it is important for website data transfer.	Recognise that a network is two or more devices connected. Explain how information moves around a network and the role of the server. Understand that networks connect to the internet via a router. Explain some of the journey a website goes through to reach your computer. Explain that websites are split into small pieces (packets) to be sent via the internet.

Wired Wireless Wireless Access Points World Wide Web		

Term 1.2 **Computing systems and networks 2: Emailing**		
Vocab	Knowledge	Outcomes
Attachment Bcc (Blind carbon copy) Cc (Carbon copy) Compose Content Cyberbullying Document Domain Download Email Email account Email address Emoji Emotions Fake Font Genuine Hacker Icons Inbox Information Link Log in Log out Negative language	To understand that email stands for 'electronic mail.' To know that an attachment is an extra file added to an email. To understand that emails should contain appropriate and respectful content. To know that cyberbullying is bullying using electronics such as a computer or phone.	Log in and out of email. Send a simple email with a subject plus 'To' and 'From' in the body of the text. Edit an email. Type in the email address correctly and send the email. Add an attachment to an email. Write an email using positive language, with an awareness of how it will make the recipient feel. Recognise unkind behaviour online and know how to report it. Offer advice to victims of cyberbullying. Recognise when an email may be fake and explain how they know.

Password Personal information Positive language Reply Responsible digital citizen Scammer Settings Send Sign in Spam email Subject bar Theme Tone Username Virus WiFi		

Term 2.1
Computing systems and networks 3: Journey inside a computer

Vocab	Knowledge	Outcomes
Algorithm Assemble CPU (central processing unit) Data Decompose Desktop Disassemble GPU (graphics processing unit) Hard drive HDD (hard disk drive) Infinite loop Input Keyboard	To know the roles that inputs and outputs play on computers. To know what some of the different components inside a computer are e.g. CPU, RAM, hard drive, and how they work together. To know what a tablet is and how it is different from a laptop/desktop computer.	Recognise inputs and outputs and that the computer sends and receives information. Explain that the parts of a laptop work together and the purpose of each part. Explain what an algorithm is. Suggest what memory is for inside a computer. Make comparisons between different types of computer.

Laptop Memory Microphone Monitor Mouse Output Photocopier Program QR Code RAM (random access memory) ROM (read only memory) Storage Tablet device Technology Touchscreen Touchpad		

Term 2.2
Programming: Scratch

Key Vocabulary	Knowledge	Outcomes
Algorithm Animation Application Code Code block Coding application Debug Decompose Interface Game Loop Predict Program	To know that Scratch is a programming language and some of its basic functions. To understand how to use loops to improve programming. To understand how decomposition is used in programming. To understand that you can remix and adapt existing code.	Explain what some of the blocks do in Scratch. Explain what a loop is and include one in their program. Suggest possible additions to an existing program. Recognise where something on screen is controlled by code. Use a systematic approach to find bugs. Explain what an algorithm is and its purpose.

Remixing code Repetition code Review Scratch Sprite Tinker		

Term 3.1
Creating Media: Video Trailers

Vocabulary	Knowledge	Outcomes
Application Camera angle Clip Cross blur Cross fade Cross zoom Desktop Digital device Dip to black Directional wipe Edit Film Film editing software Graphics Import Key events Laptop Music Photo Plan Recording Sound effects Storyboard	To know that different types of camera shots can make my photos or videos look more effective. To know that I can edit photos and videos using film editing software. To understand that I can add transitions and text to my video.	Describe the purpose of a trailer. Create a storyboard for a book trailer. Consider camera angles when taking photos or videos. Import videos and photos into film editing software. Record sounds and add these to a video. Add text to a video. Incorporate transitions between images. Evaluate their own and others' trailers.

Time code		
Trailer		
Transition		
Video		
Voiceover		

Term 3.2		
Data Handling: Comparison Cards database		
Vocabulary	Knowledge	Outcomes
Categorise Category Chart Data Database Excel Fields Filter Graph Information Interpret PDF Questionnaire Record Representation Sort Spreadsheet	To know that a database is a collection of data stored in a logical, structured and orderly manner. To know that computer databases can be useful for sorting and filtering data. To know that different visual representations of data can be made on a computer.	Explain what is meant by 'field,' 'record,' and 'data.' Compare paper and computerised databases. Put values into a spreadsheet. Sort, filter and interpret data in a spreadsheet. Create a graph on Google Sheets. Explain the purpose of visual representations of data.