Computing End Points **EYFS VOCAB** **KS1 VOCAB** **LKS2VOCAB** **UKS2 VOCAB**

EYFS	End points / questions	Key Vocabulary
E Safety	Know about good & bad choices in real life e.g. taking turns, saying kind things, helping others, telling an adult if something upsets you. (How can you be a good friend?) Know how to play appropriate games on the Internet. (What games have you played on the internet?) Understand good and bad choices when using websites – being kind, telling a grown up. if something upsets us & keeping ourselves safe by keeping information private. (How can you stay safe on the internet?)	internet, information, technology, website
Programming	End points / questions Know how adults operate equipment around the school, independently operating simple equipment. (Can you help me operate…?) Know that I can use simple software to make things happen. (What do the arrow keys/buttons do? How can you make a word appear on the screen?) Know that buttons on a floor robot make it move and that different buttons make different movements. (Can you make the Bee-Bot move?) Know how to make choices with toys, software and websites. (Which did you choose and why? How is this website useful/interesting?)	instruction, command, program, Bee-Bot
Multimedia	End points / questions Know how to rearrange objects and pictures on a screen. (Can you move the X over there?) Understand how to input text, images and sound when using ICT. (Tell me how you made this.) Know how to take a photograph with a camera or tablet. (Can you take a photo?) Know how to create pictures using paint programs. (Can you paint a picture?) Develop an interest in ICT by using age-appropriate websites or programs. (What do you like about this website?)	type, text, image, website
Technology in Our Lives	End points / questions Recognise purposes for using technology in school and at home. (Name something in class that uses technology. Name something at home that uses technology) Understand that things they create belong to them and can be shared with others using technology. (How can we share this picture with your parents at home?) Know that they can use the Internet to play and learn. (What can you do on the internet?) Begin to understand how to search for information on the internet. (How can I use the computer to answer a question?) I know how to play games on the interactive whiteboard. (What happens if we touch the screen on this game?) Understand to sit quietly and look at the screen when a video clip is playing. (What happened in the clip we saw?) Understand to sit quietly and listen carefully when a sound clip or piece of music is playing. (What was the music like?)	computer, keyboard, keys, monitor, mouse, internet
Data Handling	End points / questions Know how to collect information as photos or sound files. (Can you take a picture?)	information

Year 1	End points / questions	Key Vocabulary
Online Safety & Exploring Purple Mash	Use technology safely and respectfully, keeping personal information private (Why is it important to use an avatar instead of a photo of ourselves online?) Login safely, log out correctly and understand the importance of a password (What is a password and why should we keep them safe?) Understand where to go for help and support when they have concerns about content or contact (Who can you tell if you've seen something you didn't like online?) Know how to use some of the tools within Purple Mash (How do you add pictures and text in Purple Mash?)	internet, information, technology, website avatar, login, log out, notification, password
Grouping and sorting	End points / questions Know how to sort items using a range of criteria (What's the same about the objects? What's different?) Know how to sort items on the computer (Why is using the computer better than sorting by hand?) Know that sort criteria needs to be input accurately (What would happen if we used the wrong sorting criteria?)	computer, criteria, groups, sort
Pictograms	End points / questions Know that technology has many purposes, including to create, store and manipulate digital content (When making content on the computer or tablet, why is it helpful to store/save our work?) Know how to retrieve stored digital content (Can you find and open the file you named X?) Know that data can be presented in picture format (Why is the pictogram easy to understand?) Know that pictograms can show the results of an experiment (What does the pictogram show us about the result?)	Information, image data, compare, pictogram, results
Lego Builders	End points / questions Understand that following instructions very strictly may produce a different outcome to completing the task without instructions (How are the two outcomes different?) Work out what is wrong when the steps are out of order in instructions. (Why might the instructions not work?) Know that computer instructions are known as algorithms (What is an algorithm?) Know that algorithms are made up of code (How to we build the algorithm using Purple Mash?) Understand that if something does not work how it should it means the instructions are incorrect. (Can you find the error in the instructions?)	instruction, command, program, algorithm, code, debugging, outcome
Maze Explorers	End points / questions Know that an algorithm written for a computer is called a program. (What do we call an algorithm written for a computer?) Understand how to create and debug a set of instructions (algorithm) (Why did the algorithm not work? What do we need to do to fix it?) Know when the steps are out of order in instructions. (What is the right order for the steps if we want this to happen?) Know how direction keys work and how to use them as part of an algorithm (What will the forward arrow do?)	computer, instruction, command, program algorithm, direction, undo
	End points / question	type, text, image,

Animated Story Books	Know that animation can be added to a story (How can we add animation to our story?) Understand that sound can be added to stories, including sounds we have recorded ourselves (Show me how to add sound to this story. How does sound make the story better?) Know how to add backgrounds and copy and paste images (Why should we use copy and paste instead of drawing the image every time?) Know how to use class display boards to share content (Why is it important to post responsibly on display boards?)	animation, background, clip-art gallery, e-book, font
Coding	End points / questions	instruction, command, program, algorithm, background, code, debug/debugging, event, object, output, run
	Understand what instructions are and predict what might happen when they are followed (What might happen when we run the program?) Know how to use code to make a computer program (Show me what we can use to make a program) Understand what objects, actions, backgrounds and events are (Point to the object/action/background/event in this program) Know how to use an event to control an object (How can we make the object move to the left?) Know how to plan and make a simple computer program (What could we write a program for? What would we use to make it?)	
Spreadsheets	End points / questions	information cell, column, count tool, data, row, spreadsheet,
	Know what a spreadsheet program looks like (Which of these is a spreadsheet?) Understand what spreadsheets can be used for (How does a spreadsheet make counting numbers quicker?) Know how to enter data into spreadsheet cells (How do we input a number into the cell?) Know how to create a spreadsheet that features clipart (Can you put a picture of a dog in the cell?) Know how to use the lock, move cell and speak and count control tools (Why is the lock tool useful? How can the speak and count tool be helpful?)	
Technology outside school	End points / questions	computer, keyboard, keys, monitor, mouse, internet technology
	Know some examples of technology around the local community (What does this button do to the traffic lights? What makes the street light come on? What is this tall pole for? How do we pay for our shopping in the supermarket?) Understand some ways in which technology is used outside school (Draw four different ways you use technology at home)	

Year 2	End points / questions	Key Vocabulary
Coding	Know an algorithm is a set of instructions to complete a task and how to create a program that uses an algorithm (What do we call a set of instructions to complete a task?) Know how to build an algorithm that follows a timed sequence and includes a collision detection event (What is a collision detection event?) Understand that different objects have different properties (Which is the best object to use here?) Understand what different events do in code (Describe what will happen if we choose this event) Understand the function of buttons in programs (What use does the button have in the program?) Understand and debug simple programs (Why doesn't this program work as expected? What do we need to do to fix it?)	instruction, command, program, action, collision detection, algorithm, event, background, debug, execute, object, output, run
Online Safety	End points / questions Know how to refine searches using the search tool (How can we narrow our search results?) Understand that information put online leaves a digital footprint or trail (Why do we need to be very careful about what our digit footprint shows?) Understand how we should talk to others in an online situation and know how to use email respectfully (How might someone feel if you type or say mean things to them online?) Begin to understand about sharing things globally on the internet (Who can see the content we post on our class website? Who can see what we post on SeeSaw?) Know how to keep personal data and hardware secure (Why do mobile phones have passcodes, fingerprint or facial recognition?	internet, information, technology, website attachment, filter, private, digital footprint, search, sharing, password
Spreadsheets	End points / questions Know how to copy and paste (Why do we use copy and paste instead of typing everything in over and over?) Know how to use totalling tools (What does a totalling tool do? How does the totalling tool save us time?) Understand that a spreadsheet can add amounts (Why is this better than adding amounts ourselves?) Know how to create a table (What is a table?) Know how to create a block graph (What does the block graph show?)	information cell, column, count tool, data, row, spreadsheet drag, table, total, equals tool
Questioning	End points / questions Know that the information provided on pictograms is of limited use beyond answering simple questions (What doesn't the pictogram tell us?) Understand how a binary tree separates information (Why do the answers have to be yes or no?) Know that binary trees cannot be used to answer more complicated questions (What question could you not ask the binary tree?) Know that a database is needed to answer more complex search questions (What is a database?) Know how to use the search tool to find information (What does a search tool do?)	information, image data, compare, pictogram, results, binary tree, field, record, search, database

Effective searching	End points / questions	internet, information, technology, website digital footprint, web page, web site, search engine, browser, filter
	Understand the terminology associated with searching and the internet (What do I mean when I say digital footprint?) Know the basic parts of a web search engine page (Can you name an internet browser?) Know how to search the internet for answers to a quiz (Where do we type our search question?) Know how to search effectively (What 3 tips would you give someone else to help them search the internet effectively?)	
Creating pictures	End points / questions	tools, template, fill, palette
	Know that templates can be used to help us select the best tools for particular art styles (Why is using a template helpful?) Know how to recreate work of impressionist artists using the impressionism template (What are the main features of this style of art?) Know how to recreate pointillist art using the pointillism template (Do you think using technology makes pointillism art easier or harder? Why?) Know how to recreate the work of Mondrian using the lines template (What are the best colours to use to recreate this artwork?) Know how to recreate the work of William Morris using the patterns template (Why do you think Morris' work is used a lot to decorate homes such as on wallpaper or curtains? How does the patterns template make this effective?) Know how to recreate surrealist art using the eCollage function in 2Paint A Picture (How would you describe surrealist art?)	
Making music	End points / questions	beat, sound effect, tempo, note, volume
	Know that music can be made digitally using technology Know how to explore, edit and combine sounds using technology (What are the different sounds you can use?) Know how to change the volume of background sounds (What effect does changing the volume have on the tune?) Understand that tunes can depict different feelings (How might a happy tune differ from a sad one?) Know how to record own sound (What sounds of your own can you make and record?) Know how to create own tune using sounds they have added (Do your own sounds improve the overall tune?)	
Presenting ideas	End points / questions	digital content, e-book, mind map, presentation, technology
	Understand that digital content can be presented in many forms (How can digital content be presented?) Know how to make a quiz using 2Quiz (What can you tell me about your work and how it could be improved next time?) Know how to make a non-fiction fact file using multimedia (What media did you combine to make your fact fie?) Know how to make digital content to achieve a given goal by combining several software packages (How effective was your presentation to the class? How did the technology enhance it?)	

Year 3	End points / questions	Key Vocabulary
Coding	Understand what a flowchart is and how flowcharts are used in computer programming (How does the flowchart help us when adding code?) Know which type of timer to use for which purpose (When should we use a timer-after command? When should we use a timer-every command?) Know how to use the repeat command (What effect does the repeat command have on the program?) Understand the importance of nesting (What is nesting? What happens if we nest blocks incorrectly?) Know how to design and create an interactive scene (Is your plan so good that someone else could follow it to make your program?)	instruction, command, program, action, collision detection, algorithm, event, background, debug, execute, object, output, run flowchart, input, interval, nesting, repeat, scene, sequence, timer
Online safety	End points / questions Know what makes a safe password (Why is it good to have a mix of numbers and special characters in a password?) Understand how the internet can be used in effective communication (What different ways do you use the internet at home and at school?) Understand how a blog can be used to communicate with a wider audience (How is a blog different to an email?) Know that not all websites provide us with the truth (How can we check the information we have read online?) Understand the meaning of age restrictions symbols on digital media and devices (Which symbols should you look for before watching a video or film? Where can you watch videos that do not appear with ratings first to inform you?)	internet, information, technology, website attachment, filter, private, digital footprint, search, sharing, password blog, spoof, reputable source, reliable source, verify, vlog
Spreadsheets	End points / questions Know how to use the symbols more than, less than, equal to and compare values (Where have you seen and used these symbols before?) Know how to use spreadsheets to collect data and produce a variety of graphs (Which type of graph is most suitable for your data?) Understand the advanced mode of 2Calculate to learn about cell references (How would you locate a cell in the advanced mode?)	information cell, column, count tool, data, row, spreadsheet drag, table, total, equals tool advance mode, cell address, more than, less than & equal tool, pie chart, quiz tool, spin tool
Touch typing	End points / questions Understand the correct way to sit at the keyboard (How should we sit at the keyboard?) Know how to use the home, top and bottom row keys (How do you find the home row?) Know how to type with the left and the right hand (Can you type with both hands at once? Why is this better than just using one?)	computer, keyboard, keys, type, monitor, mouse, internet posture, space bar, home keys
Email	End points / questions Know about different forms of communication (What is email?) Know how to use an address book to open and respond to an email (What is the purpose of the address book?) Know how to use email safely (Why should you think carefully before you compose your email? When should you use the report to teacher button?) Know how to add an attachment to an email (When might you want to add an attachment?)	internet, information, technology, website attachment, filter, private, digital footprint, search, sharing, password address book, BCC, CC, email, inbox, save to draft, trusted contact

Branching database	End points / questions Know how to compose closed questions (What is a yes/no question?) Know how to create a branching database (What did you sort using your branching database?) Know the limitations of a branching database (What questions can't we ask it?)	information, image data, compare, pictogram, results, binary tree, field, record, search, database, debugging binary tree, branching database
Simulation	End points / questions Begin to understand what simulations are (When might you use a simulation?) Know some different kinds of simulations (Can you name three different simulations?) Understand there are some problems with simulations (What are the problems with simulating real life?)	analysis, simulation, modelling, evaluation, decision
Graphing	End points / questions Name some different types of graph (Can you name 3 different types of graph? What subjects in school have you made graphs in before?) Understand the graphs and use them to answer questions (What are the frame lines on the graph called and what do they mean?) Know how to present the results of an investigation in graphic form (What is the best type pf graph to show your data and why?)	information column, row, data axis, chart, graph, investigation
Presenting with Microsoft Power Point	End points / questions Understand the uses of PowerPoint (Name some uses of PowerPoint) Know how to create a multimedia presentation in PowerPoint (What different media can you add?) Understand what makes a presentation engaging (What tools can you use to make it engaging?)	information, image digital content, e-book, mind map, presentation, technology, animation background, clip-art gallery, font border properties, formatting, slide, slideshow, text box, transition, word art
Presenting with Google Slides	End points / questions Understand the purpose of the Slides tool (Name some uses of Slides) Know how to add slides and media to presentations (What different media can you add?) Know how to format text (How does formatting the text enhance your presentation?) Know how to enhance a presentation with shapes and lines (What effect do the shapes and lines have?) Understand what makes a presentation engaging (How can you make your presentation engaging?)	information, image digital content, e-book, mind map, presentation, technology, animation background, clip-art gallery, font border properties, formatting, slide, slideshow, text box, transition, word art

Year 4	End points / questions	Key Vocabulary
Coding	Begin to understand selection in computer programming (What does selection mean in coding?) Understand how an IF statement works (How does a computer use an IF statement?) Understand how to use co-ordinates in computer programming (How can co-ordinates be useful when coding programs with selection?) Understand how an IF/ELSE statement works (How is an IF/ELSE statement different to an IF statement?) Understand what a variable is in computer programming (How can variables be useful when coding programs with selection?)	instruction, command, program, action, collision detection, algorithm, event, background, debug, execute, object, output, run flowchart, input, interval, nesting, repeat, scene, sequence, timer alert, algorithm, execute, 'if' statements, 'if/else' statements, implement, selection, variable
Online Safety	End points / questions Understand how children can protect themselves from identify theft (How can you protect yourself from identify theft?) Know that information put online leaves a digital footprint or trail and that this can aid identity theft (What information is in your digital footprint?) Know the risks and benefits of installing software including apps. (What is SPAM?) Know that copying the work of others and presenting it as their own is called 'plagiarism' and to consider the consequences of plagiarism (What is meant by plagiarism?) Understand the importance of balancing game and screen time with other parts of their lives (How much screen time do you think you should have every day?)	internet, information, technology, website attachment, filter, private, digital footprint, search, sharing, password blog, spoof, reputable source, reliable source, verify, vlog cookies, copyright, malware, phishing, plagiarism, ransomware, spam, virus
Spreadsheets	End points / questions Understand how to format cells as currency, percentage, decimal to different decimal places or fraction (How do I format the cells?) Know that the formula wizard can be used to calculate averages (How do I use formula in a spreadsheet?) Know how to combine spreadsheet tools to achieve a goal (Can you make a timed times tables test?) Know how to add a formula to a cell to make a calculation in that cell (How can spreadsheets save time in calculations?)	information cell, column, count tool, data, row, spreadsheet drag, table, total, equals tool advance mode, cell address, more than, less than & equal tool, pie chart, quiz tool, spin tool average, chart, formula, format cell, formula wizard, line graph, random number tool
Writing for different audiences	End points / questions Know how to input text into a document (How do I place typing on a page?) Know how to use toolbars (How do I change the format and case of text?) Know how to move text in a document (How do I cut, copy and paste?) Understand how font size and style can affect the impact of a text (How can you make the title or headings stand out?) Understand how to create and edit a document (How do I edit and present a document in the most appropriate format?)	type, text, image, animation, background, clip-art gallery, e-book, font case. format, cut, copy, paste, document
Logo	End points / questions Know that Logo is a text-based coding language used to control and on-screen turtle to create mathematical patterns (What is Logo?) Know the structure of coding language in Logo (What do FD, BK, RT and LT mean?) Know how to use the repeat command (How does the repeat command make coding more efficient?) Know how to use Logo to create shapes (What is the code to draw the letters in your name?) Know what a Logo procedure is and when to use them (How do procedures save time?)	instruction, command, program, action, collision detection, algorithm, event, background, debug, execute, object, output, run flowchart, input, interval, nesting, repeat, scene, sequence, timer alert, algorithm, execute, 'if' statements, 'if/else' statements, implement, selection, variable

		grid, LOGO, LOGO commands (FD, BK, RT, LT), multi line mode, procedure, SETPC, SETPS
Animation	End points / questions Know what animation is and describe animation before and after the invention of computers (What are the pros and cons of animating by hand versus animating by computer?) Understand the term 'onion skinning' and use the onion skinning tool in an animation (What is the purpose of onion skinning in animation?) Know how to add backgrounds and sounds to animations (How do backgrounds and sounds enhance the animation?) Know what stop motion animation is (Can you describe the features of stop motion animation? Can you give an example of a well-known stop motion animation?) Know how to use a timer in animations (How can we make our animations appear at a given time?)	type, text, image, animation, background, clip-art gallery, e-book, font FPS (frames per second), frame, onion skinning, pause, stop motion
Effective Searching	End points / questions Know where to look for search results on the web-page (Where can we find the results of our search?) Know how to search effectively to find out information (What is the difference between a sentence and 'key words'? Do we need to use punctuation in our search queries?) Know ways of checking if something on the internet is true? (What is a personal trust level? How can we use the links to help determine whether the information is true?)	internet, information, technology, website digital footprint, web page, web site, search engine, browser, filter Easter eggs, key words, search query, results page, reputable source, reliable source, verify
Hardware Investigators	End points / questions Understand the different parts that make up a computer (What are the jobs of the different parts of a computer? What does the word component mean?) Know the names of the different parts that make up a computer (Can you name six components inside a computer?) Know the difference between hardware and software (Give an example of hardware. Give an example of software) Know what peripherals are (Name a computer peripheral)	computer, keyboard, keys, monitor, mouse, internet technology, output posture, space bar, home keys, input components, CPU, graphics card, hard drive, motherboard, network card, peripherals, RAM, software
Making Music	End points / questions Know the main elements of music (Can you name 7 elements of music?) Understand rhythm (What is rhythm?) Understand tempo (Describe the tempo of this piece) Know how to electronically create a piece of music (Describe how you created your piece of music)	beat, sound effect, tempo, note, volume BPM, dynamics, pitch, synths, rhythm, harmonious, pulse, texture

Year 5	End points / questions	Key Vocabulary
Coding	Know how to code efficiently by simplifying code (How can this code be made more efficient?) Know what simulations are (What is a physical system and why do we simulate them?) Know what decomposition and abstraction are in computer science (How does decomposing a task make it easier to code? What details did you remove to get the program functioning?) Understand how to use friction in code (Can you name a simulation that might use friction?) Understand how functions work in code (Why do we use functions in code?) Understand what the different variable types are (Why is it important to set a variable value?) Know what a string is and how to use it in a program (What is a string?) Understand what concatenation is and how it works (How have you used concatenation?)	instruction, command, program, action, collision detection, algorithm, event, background, debug, execute, object, output, run flowchart, input, interval, nesting, repeat, scene, sequence, timer alert, algorithm, execute, 'if' statements, 'if/else' statements, implement, selection, variable abstraction, concatenation, decomposition, efficient, function, physical system, simplify, string, friction
Online Safety	End points / questions Understand the impact of sharing digital content (Why should you think carefully before sharing something online?) Know what their responsibilities are when online (How can you behave safely and respectfully online? Do people need to reply to text messages straight away? Is it always possible to read and reply to a message immediately?) Understand the advantages, disadvantages, permissions and purposes of altering an image digitally and the reasons for this (What is a better option than using a photograph?) Know how to reference sources in their work (What is a reference or citation and why do they need to be used?)	internet, information, technology, website attachment, filter, private, digital footprint, search, sharing, password blog, spoof, reputable source, reliable source, verify, vlog cookies, copyright, malware, phishing, plagiarism, ransomware, spam, virus citation, copyright, creative commons licence, encrypt, PEGI ratings, SMART rules, validity
Spreadsheets	End points / questions Know how to use formulae for converting measurements (Why would we need to covert measures like length and distance?) Know how to use the count tool to answer hypotheses (How does the count tool make finding things out easier?) Know how to use formulae to calculate area and perimeter (How can formulae help when solving a real life problem such as how many sheep can fit in a farmer's field?) Know how to create formulae that use text variables (How do we track changes that happen while a program is running, such as our age in seconds?) Understand that spreadsheets are useful for planning real-life events (How was the spreadsheet useful when planning a cake sale? What other events could be planned using a spreadsheet?)	information cell, column, count tool, data, row, spreadsheet drag, table, total, equals tool advance mode, cell address, more than, less than & equal tool, pie chart, quiz tool, spin tool average, chart, formula, format cell, formula wizard, line graph, random number tool

		formula bar, 'how many?' tool, totalling tool, variables
Databases	End points / questions Know what a database is (Can you tell me what a database is?) Know what databases are used for in everyday life (Do we use databases in school?) Know how to search for information in a database (What five ways can you search or sort a database?) Understand what fields are and choose suitable headings for them (What fields can we use in a database about the children in our class?)	information, image data, compare, pictogram, results, binary tree, field, record, search, database, debugging, avatar, binary tree, branching database, chart, arrange, collaborative, field, group, database report, statistics
Game Creator	End points / questions Understand how to plan a game (What are the important things to consider when planning a game? Who is your game for?) Know how to design and create the game environment. (What type of environment did you choose for your game? Who might your game appeal to?) Know how to design and create the game quest (What was the aim and outcome of your game?) Understand how to finish and share the game (Did others enjoy your game?) Understand the importance of self and peer-evaluation (After looking at the games of your peers, is there anything you would change about your own?)	type, text, image, animation, background, clip-art gallery, e-book, font FPS (frames per second), frame, onion skinning, pause, stop motion, texture (2 meanings) customise, evaluation, interactive, screenshot, perspective, playability
Modelling	End points / questions Know some of the skills of computer aided design (What can we use 2Design and Make for?) Know what points are and what happens when you move them (What happens to the vehicle when you move its points?) Understand criteria and how to create a design that meets it (What were the criteria for the model you made?) Know how CAD software is used in industry (What examples can you give of CAD software used in industry?)	template analysis, simulation, modelling, evaluation, decision, 3D printing, CAD (computer aided design), net, points, pattern fill

Word processing	End points / questions	computer, keyboard, keys, type, monitor, mouse, internet information, image digital content, e-book, mind map, presentation, technology, animation background, clip-art gallery, font posture, space bar, home keys, word art, formatting, text box, document, bulleted list, caps lock, copy and paste, copyright, creative commons, cursor, page orientation, text wrapping, readability
	Know what a word processing tool is for. (What would you use word processing for?) Know how to add and edit images to a word document. (How do you add an image to a word processing document?) Know how to use word wrap with images and text. (How would you move the image so it goes behind/in front/side of the text you are writing?) Know how to change the look of text within a document. (How could you change the font size/style? How would you make it bold?) Understand how to save and open documents. (How do you save a document on a word processing tool?)	
Concept maps	End points / questions	digital content, e-book, mind map, presentation, technology concept, collaborate, concept map, connection, node, presentation mode, story mode
	Understand the need for visual representation when generating and discussing complex ideas (What is a concept? How does the concept map help us to organise complex ideas?) Know and understand the correct vocabulary when creating a concept map (What is a node? Show me a connection) Understand how a concept map can be used to retell stories and information (Use your map to explain the information in an organised way)	

Year 6	End points / questions	Key Vocabulary
Coding	Know how to use selection and variables (How did you use selection and variables help you to simplify the code in your game?) Understand functions; what they are, why they are useful and how they are created and called (How does using functions save time when coding?) Know how to create and debug code using flowcharts (Can you predict where the errors in the code are based on the flowchart? How can the code be debugged?) Understand how user input can be used in a program (In 2Code Gorilla, how can a program receive user input?) Understand how to make a text-adventure game (What ideas can you take from games you have already played?)	instruction, command, program, action, collision detection, algorithm, event, background, debug, execute, object, output, run flowchart, input, interval, nesting, repeat, scene, sequence, timer alert, algorithm, execute, 'if' statements, 'if/else' statements, implement, selection, variable abstraction, concatenation, decomposition, efficient, function, physical system, simplify, string, friction co-ordinates, launch command, procedure, simulation, repeat until, tab
Online safety	End points / questions Know some benefits and risks of mobile devices sharing a user's location (How do we know if a website is secure? When can location sharing be a good thing?) Have a clear understanding of what appropriate online behaviour is (How can we make sure we are behaving appropriately online? Should we treat people differently online that we do in person? What is cyber bullying? What impact can cyber bullying have on people? What is the long term impact of sharing something online?) To understand how to balance screen time and other parts of life (How can you set and stick to sensible screen time targets? What could you do instead of spending time on a screen?) Know some of the positive and negative influences of technology on health (How does using technology affect your sleep? How can we use technology to benefit our health?)	internet, information, technology, website attachment, filter, private, digital footprint, search, sharing, password blog, spoof, reputable source, reliable source, verify, vlog cookies, copyright, malware, phishing, plagiarism, ransomware, spam, virus citation, copyright, creative commons licence, encrypt, PEGI ratings, SMART rules, validity data analysis, location sharing, print screen, secure websites
Spreadsheets	End points / questions	information

	Know how to use a spreadsheet to investigate probability (What is the name of the tool that we use to investigate probability?) Know how to use a spreadsheet to calculate the discount and final prices in a sale (What is the simplest formula we can use? Can you use addition and subtraction in the same formula?) Understand how to use a spreadsheet to plan actions (How does the spreadsheet help you plan how to spend and save your pocket money?) Understand how to use a spreadsheet to plan costings and profit for an event (How can using formulae rather than 'hard coding' totals make the spreadsheet more effective?)	cell, column, count tool, data, row, spreadsheet drag, table, total, equals tool advance mode, cell address, more than, less than & equal tool, pie chart, quiz tool, spin tool average, chart, formula, format cell, formula wizard, line graph, random number tool formula bar, 'how many?' tool, totalling tool, variables move cell tool, budget, dice tool, formula bar, probability, expense, profit,
Blogging	End points / questions Know the purpose of writing a blog (Why do people choose to blog?) Know some of the features of successful blog writing (What features of the blog keep the reader engaged?) Understand how to write a blog and a blog post (What is the effect upon the audience when changing the visual properties of the blog?) Understand the importance of commenting on blogs (Why is engaging with blogs important?) Understand how and why blog posts and comments are approved by the teacher (Who can see the blog post and comments? Who can comment? Why do the blog and the comments need to be approved?)	type, text, image, clip-art gallery, font case, format, cut, copy, paste, document approval, archive, blog, blog post, collaborate, commenting, vlog
Text Adventures	End points / questions Know what a text adventure is (What is a text adventure?) Know how to use software to plan a story based adventure (How does 2Connect help organise your ideas?) Know how to use software to make a story based adventure (How does 2Create a Story help you make your ideas into an adventure?) Know how to use written plans to code a map-based adventure (Can you make your plans come to life by coding the adventure?)	type, text, image, instruction, command, program, flowchart, input, interval, nesting, repeat, scene, sequence, timer alert, algorithm, execute, 'if' statements, 'if/else' statements, implement, selection, variable animation, background, clip-art gallery, e-book, font, action, collision detection, algorithm, event, background, debug, execute, object, output, run customise, evaluation, interactive, screenshot, perspective, playability text-based adventure, sprite

		abstraction, concatenation, decomposition, efficient, function, physical system, simplify, string, friction co-ordinates, launch command, procedure, simulation, repeat until, tab
Networks	End points / questions Know what the internet consists of (what is the difference between the internet and social media? What is a website?) Know what a LAN and a WAN are (What's the difference between LAN and WAN?) Understand how the internet is accessed at school (What is a network?) Know the history and the age of the internet (How has the internet and the way people access it changed since it was invented? Who invented the World Wide Web?) Understand that technology changes at a rapid rate with improvements constantly being sought out by computer scientists (What might the internet be like in the future? What do you think is the future of technology?)	computer, keyboard, keys, monitor, mouse, internet technology, output posture, space bar, home keys, input components, CPU, graphics card, hard drive, motherboard, network card, peripherals, RAM, software social media, hub/switch, wide area network (WAN), world wide web, local area network (LAN), router, wi-fi
Quizzing	End points / questions Know how create a picture-based quiz for young children (What will make a child want to complete the quiz? What is the aim of the quiz you made? Why should the quiz suit the reading ability of the intended age group?) Understand how to use question types (Name three question types in 2Quiz) Know how make a quiz that requires the player to search a database (How did you use the database to help you write your quiz questions?)	information, image data, compare, pictogram, results, binary tree, field, record, search, database, debugging, avatar, binary tree, branching database, chart, arrange, collaborative, field, group, database report, statistics selection, engagement, audience, audio, case-sensitive, clone
Binary	End points / questions Understand that whole numbers are used as the basis for representing all types of data in digital systems (What does the word digital mean?) Know that digital systems represent all types of data using number codes that ultimately are patterns of 1s and 0s (called binary digits) which is why they are called digital systems (Where does the phrase digital systems come from?) Understand that binary represents the on and off electrical states respectively in hardware and robotics (How does binary relate to the programs that you use or create?)	represent, binary, digital, system, base 2, nibble, byte, kilobyte (KB), megabyte (MB), gigabyte (GB), terabyte (TB), bit, digit, integer, switch (2 meanings), base 10, transistor, machine code, variable

Spreadsheets (MS Excel)	End points / questions	information cell, column, count tool, data, row, spreadsheet drag, table, total, equals tool advance mode, cell address, more than, less than & equal tool, pie chart, quiz tool, spin tool average, chart, formula, format cell, formula wizard, line graph, random number tool auto fit, cell reference, computational model, conditional formatting, delimiter, horizontal axis, range, vertical axis
	Know what a spreadsheet looks like (What are the features of a spreadsheet?) Understand how to transfer knowledge about formulae in 2Calculate into MS Excel (What's the same? What's different?) Understand how using Excel can save time and effort when calculating (Why is this more efficient than calculating it manually?) Know how to use a spreadsheet to model a real-life situation (Can you plan for an event using Excel to work out costings and profits?) Understand that changing how complex data is presented in Excel can make it clearer (What type of graph will suit this data set?)	