Computing Knowledge, Skills and Vocabulary

Year 1	1.1	1.4	1.5	1.7	1.6	1.3	1.9
Trips and experiences linked to Computing: Children to use iPads to take photographs of trips and experiences. Children to use iPad to take videos and record voice about trips and experiences. Children to talk about and record the different technologies they see in use on trips.							
Area of Learning	Online Safety & Exploring Purple Mash	Lego Builders	Maze Explorers	Coding	Animated Story Books	Pictograms	Technology outside school
Knowledge	To 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.	To understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions.	To understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. To create and debug simple programs.	To understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. To create and debug simple programs. To use logical reasoning to predict the behaviour of simple programs.	To use technology purposefully to create, organise, store, manipulate and retrieve digital content.	To use technology purposefully to create, organise, store, manipulate and retrieve digital content.	To recognise common uses of information technology beyond school
Skills	Children understand the importance of keeping information, such as their usernames and passwords, private and actively demonstrate this in lessons. Children take ownership of their work and save this in their own private space such as their My Work folder on Purple Mash.	Children understand that an algorithm is a set of instructions used to solve a problem or achieve an objective. They know that a computer program turns an algorithm into code that the computer can understand	Children understand that an algorithm is a set of instructions used to solve a problem or achieve an objective. They know that a computer program turns an algorithm into code that the computer can understand. Children can work out what is wrong with a simple algorithm when the steps are out of order, e.g. The Wrong Sandwich in Purple Mash and can write their own simple algorithm, e.g. Colouring in a Bird activity.	Children understand that an algorithm is a set of instructions used to solve a problem or achieve an objective. They know that a computer program turns an algorithm into code that the computer can understand. Children know that an unexpected outcome is due to the code they have created and can make logical attempts to fix the code, e.g. Bubbles activity in 2Code. When looking at a program, children can read code one line at a time and make good attempts to envision the bigger picture of the overall effect of the program. Children can, for example, interpret where the turtle in 2Go challenges will end up at the end of the program.	Children are able to sort, collate, edit and store simple digital content e.g. children can name, save and retrieve their work and follow simple instructions to access online resources,	Children are able to sort, collate, edit and store simple digital content e.g. children can name, save and retrieve their work and follow simple instructions to access online resources, use Purple Mash 2Quiz example (sorting shapes), 2Code design mode (manipulating backgrounds) or using pictogram software such as 2Count.	Children understand what is meant by technology and can identify a variety of examples both in and out of school. They can make a distinction between objects that use modern technology and those that do not e.g. a microwave vs. a chair.
Vocabulary	Log in, Username, Password Avatar, My Work, Log out, Save, Notification, Topics, Tools	Instruction, Algorithm, Computer, Program, Debug Errors, Data	Direction, Challenge, Arrow Undo, Rewind, Forward, Backwards, Right turn, Left turn, Debug, Instruction Algorithm	Action, Background, Code block, Code Design, Coder/ing Collision, Detection, Design Mode, Input, Object, properties, Scale, Sound Stop command, When Key Command	Animation, E-Book, Font, File Sound Effect, Display Board	Pictogram, Diagram, Data Facts, Statistics, Collate, Information	Technology

Computing Knowledge, Skills and Vocabulary							
Year 2	**2.2**	**2.1**	**2.4**	**2.7**	**2.5**	**2.6**	**2.8**
Trips and experiences linked to Computing: Children to use iPad's to take photographs of trips and experiences. Children to use iPad's to take video's and record voice about trips and experiences. Children to talk about and record the different technologies they see in use on trips.							
Area of Learning	Online Safety	Coding	Questioning	Making Music	Effective Searching	Creating Pictures	Presenting Ideas
Knowledge	To 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.	To understand what algorithms are; how they are implemented as programs on digital devices; and that programs execute by following precise and unambiguous instructions. To create and debug simple programs. To use logical reasoning to predict the behaviour of simple programs.	To understand the importance of phrasing questions and that certain data-handling resources are limited in the answers they can provide.	To use technology purposefully to create, organise, store, manipulate and retrieve digital content.	To recognise common uses of information technology beyond school.	To use technology purposefully to create, organise, store, manipulate and retrieve digital content.	To use technology purposefully to create, organise, store, manipulate and retrieve digital content.
Skills	Children know the implications of inappropriate online searches. Children begin to understand how things are shared electronically such as posting work to the Purple Mash display board. They develop an understanding of using email safely by using 2Respond activities on Purple Mash and know ways of reporting inappropriate behaviours and content to a trusted adult.	Children can explain that an algorithm is a set of instructions to complete a task. When designing simple programs, children show an awareness of the need to be precise with their algorithms so that they can be successfully converted into code. Children can create a simple program that achieves a specific purpose. They can also identify and correct some errors, e.g. Debug Challenges: Chimp. Children's program designs display a growing awareness of the need for logical, programmable steps. Children can identify the parts of a program that respond to specific events and initiate specific actions. For example, they can write a cause and effect sentence of what will happen in a program.	Children understand that the information on pictograms cannot be used to answer more complicated questions. Children have used a range of yes/no questions to separate different items. Children understand what is meant by a binary tree. Children have designed a binary tree to sort pictures of children. Children understand that questions are limited to 'yes' and 'no' in a binary tree. Children understand that the user cannot use 2Question to find out answers to more complicated questions. Children have matched 2Simple item pictures to names using a binary tree. Children understand what is meant by a database.	Children are able to edit more complex digital data such as music compositions within 2Sequence.	Children can effectively retrieve relevant, purposeful digital content using a search engine. They can apply their learning of effective searching beyond the classroom. They can share this knowledge, e.g. 2Publish. Children make links between technology they see around them, coding and multimedia work they do in school e.g. animations, interactive code and programs	Children are confident when creating, naming, saving and retrieving content. Children use a range of media in their digital content including photos, text and sound.	Children are confident when creating, naming, saving and retrieving content. Children use a range of media in their digital content including photos, text and sound.

Vocabulary	Search, Displayboard, Internet, Sharing, Email, Attachment, Digital Footprint	Action, Algorithm, Character, Code block, Code Design, Command, Debug/Debugging Input, Object, Properties, Repeat, Bug, Scale, Timer, When clicked, When Key, Design Mode	Pictogram, Question, Data, Collate, Binary Tree, Avatar, Database	Bpm (Beats per Minute) Composition, Digitally Instrument, Music, Sound Effects (Sfx), Soundtrack Tempo, Volume	Internet, Search, Search Engine	Impressionism, Palette Pointillism, Share, Surrealism, Template	Concept Map (Mind Map) Node, Animated, Quiz Non-Fiction, Presentation Narrative, Audience

Computing Knowledge, Skills and Vocabulary							
Year 3	**3.2**	**3.1**	**3.4**	**3.5**	**3.7**	**3.3**	**3.9**
Trips and experiences linked to Computing: Children to use iPad's to take photographs of trips and experiences. Children to use iPad's to take video's and record voice about trips and experiences. Children to talk about and record the different technologies they see in use on trips.							
Area of Learning	Online Safety	Coding	Touch Typing	Emails	Simulations	Spreadsheets	Presenting
Knowledge	To use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concern about content and contact.	To design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts. To use sequence, selection and repetition in programs; work with variables and various forms of input and output. To use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs.	To select, use and combine a variety of software	To use technology safely, respectfully and responsibly; recognise acceptable/ unacceptable behaviour; identify a range of ways to report concern about content and contact. To 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.	To 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.	To 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.	To 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.
Skills	Children demonstrate the importance of having a secure password and not sharing this with anyone else. Children can explain the negative implications of failure to keep passwords safe and secure.	Children can turn a simple real-life situation into an algorithm for a program by deconstructing it into manageable parts. Their design shows that they are thinking of the desired task and how this translates into code. Children can identify an error within their program that prevents it following the desired algorithm and then fix it.	Children can collect, analyse, evaluate and present data and information using a selection of software,	Children demonstrate the importance of having a secure password and not sharing this with anyone else. Furthermore, children can explain the negative implications of failure to keep passwords safe and secure. Children can list a range of ways that the Internet can be used to provide different methods of communication. They can use some of these methods of communication, e.g. being able to open, respond to and	Children can collect, analyse, evaluate and present data and information using a selection of software, e.g. using a branching database (2Question), using software such as 2Graph.	Children can collect, analyse, evaluate and present data and information using a selection of software, e.g. using a branching database (2Question), using software such as 2Graph. Children can consider what software is most appropriate for a given task. They can create purposeful content to attach to emails, e.g. 2Respond	Children can collect, analyse, evaluate and present data and information using a selection of software, e.g. using a branching database (2Question), using software such as 2Graph. Children can consider what software is most appropriate for a given task. They can create purposeful content to attach to emails, e.g. 2Respond

		Children demonstrate the ability to design and code a program that follows a simple sequence. They experiment with timers to achieve repetition effects in their programs. Children are beginning to understand the difference in the effect of using a timer command rather than a repeat command when creating repetition effects. Children's designs for their programs show that they are thinking of the structure of a program in logical, achievable steps and absorbing some new knowledge of coding structures.		attach files to emails using 2Email. They can describe appropriate email conventions when communicating in this way.			
Vocabulary	Password, Internet, Blog, Concept Map, Username, Website, Webpage, Spoof Website	Action, Algorithm, Bug, Code Block, Code Design, Command, Control, Debug/Debugging, Design Mode, Event, If, Input, Output, Object, Properties, Repeat, Computer Simulation, Selection, Timer, Variable	Posture, Top row keys, Home row keys, Bottom row keys, Space bar	Communication, Email, Compose, Send, Report to the teacher, Attachment, Address book, Save to draft, Password, CC, Formatting	Simulation	a < b means 'a is less than b'. a > b means 'a is greater than b'. a = b means 'a is equal to b'. Advance Mode, Columns, Cells Delete Key, Equals Tool, Move Cell Tool, Rows, Spin Tool	Animation, Media Presentation, Text box, Text formatting, Design Themes, Font, Slide, Presentation Program, Transition, WordArt

Computing Knowledge, Skills and Vocabulary								
Year 4	**4.2**	**4.1**	**4.3**	**4.4**	**4.7**	**4.6**	**4.5**	**4.8**
Trips and experiences linked to Computing: Children to use iPad's to take photographs of trips and experiences. Children to use iPad's to take video's and record voice about trips and experiences. Children to talk about and record the different technologies they see in use on trips.								
Area of Learning	Online Safety	Coding	Spreadsheets	Writing for different Audiences	Effective Search	Animation	Logo	Hardware Investigation
Knowledge	To understand how children can protect themselves from online identity theft. Understand that information put online leaves a digital footprint or trail and that this can aid identity theft. To Identify the risks and benefits of installing software including apps.	To review coding vocabulary. To use a sketch or storyboard to represent a program design and algorithm. To use the design to create a program. To introduce the If/else statement and use it in a program. To create a variable.	To use the formula wizard in the advanced mode To add formulae and explore formatting cells. To use the timer and spin button. To use line graphs. To use a spreadsheet for Budgeting. To explore Place Value with a spreadsheet.	To explore how font size and style can affect the impact of a text. To use a simulated scenario to produce a news report. To use a simulated scenario to write for a community campaign.	To locate information on the search results page. To use search effectively to find out information. To assess whether an information source is true and reliable.	To discuss what makes a good, animated film or cartoon and what their favourites are. To learn how animations are created by hand. To find out how 2Animate can be created in a similar way using the computer. To learn about onion skinning in animation. To add backgrounds and sounds to animations.	To learn the language of Logo. To input simple instructions on Logo. To use Logo to create letters. To use the Repeat function in Logo to create shapes. To use the Build feature in Logo.	To understand the different parts that make up a computer. To recall the different parts that make up a computer.

	To understand that copying the work of others and presenting it as their own is called 'plagiarism' and to consider the consequences of plagiarism. To identify appropriate behaviour when participating or contributing to collaborative online projects for learning. To identify the positive and negative influences of technology on health and the environment. To understand the importance of balancing game and screen time with other parts of their lives.	To explore a flowchart design for a program with an if/else statement To create a program which responds to the If/else command, using the value of the variable. To create a program with a character that repeats actions. To use the Repeat Until command to make characters repeat actions. To program a character to respond to user keyboard input. To make timers and counting machines using variables to print a new number to the screen every second. To explore how 2Code can be used to investigate control by creating a simulation. To know what decomposition and abstraction are in computer science. To take a real-life situation, decompose it and think about the level of abstraction. To design a decomposed feature of a real-life situation.				To be introduced to stop motion animation. To share animation on the class display board and by blogging.		
Skills	Children know that security symbols such as a padlock protect their identity online. Children know the meaning of the term 'phishing' and are aware of the existence of scam websites. Children can explain what a digital footprint is and how it relates to identity theft. Children can give examples of things that they wouldn't want to be in their digital footprint. Children can identify possible risks of installing free and paid for software.	Children can use sketching to design a program and reflect upon their design. Children can create code that conforms to their design. Children can create an 'If/else' statement. Children understand what a variable is in programming. Children can set/change the variable values appropriately. Children can interpret a flowchart that depicts an if/else flowchart.	Children can use the number formatting tools within 2Calculate to appropriately format numbers. Children can add a formula to a cell to automatically make a calculation in that cell. Children can use the timer, random number and spin button tools. Children can combine tools to make fun ways to explore number. Children can use a series of data in a spreadsheet to create a line graph.	Children have looked at and discussed a variety of written material where the font size and type are tailored to the purpose of the text. Children have used text formatting to make a piece of writing fit for its audience and purpose. Children have role-played the job of a journalist in a newsroom. Children have interpreted a variety of incoming communications and used these to build up the details of a story.	Children can structure search queries to locate specific information. Children have used search to answer a series of questions. Children have written search questions for a friend to solve. Children can analyse the contents of a web page for clues about the credibility of the information.	Children have put together a simple animation using paper to create a flick book. Children have an understanding of animation 'frames'. Children have made a simple animation using 2Animate. Children know what the Onion Skin tool does in animation. Children can use the Onion Skin tool to create an animated image. Children can use backgrounds and sounds to	Children know what the different instructions are in Logo and how to type them. Children can follow simple Logo instructions to create shapes on paper. Children can follow simple instructions to create shapes in Logo. Children can create Logo instructions to draw letters of increasing complexity. Children can write Logo instructions for a word of four letters.	Children can name the different parts of a desktop computer. Children know what the function of the different parts of a computer is. Children have created a leaflet to show the function of computer parts.

	Children know that malware is software that is specifically designed to disrupt, damage, or gain access to a computer. Children know what a computer virus is. Children are able to determine whether activities that they undertake online, infringe another's' copyright. They know the difference between researching and using information and copying it. Children know about citing sources that they have used. Children are able to take more informed ownership of the way that they choose to use their free time. They recognise a need to find a balance between being active and digital activities. Children can give reasons for limiting screen time.	Children can show how a character repeats an action and explain how they caused it to do so. Children can make a character respond to user keyboard input. Children can explain what a variable is when used in programming. Children can create a timer that prints a new number to the screen every second. Children can explain how they made their program change the number every second. Children can create an algorithm modelling the sequence of a simple event. Children can manipulate graphics in the design view to achieve the desired look for the program. Children can use an algorithm when making a simulation of an event on the computer. Children can make good attempts to break down their aims for a coding task into smaller achievable steps. Children recognise the need to start coding at a basic level of abstraction to remove superfluous details from their program that do not contribute to the aim of the task.	Children can use a line graph to find out when the temperature in the playground will reach 20°C. Children can make practical use of a spreadsheet to help them plan actions. Children can use the currency formatting in 2Calculate. Children can allocate values to images and use these to explore place value. Children can use a spreadsheet made in 2Calculate to check their understanding of a mathematical concept.	Children have used the incoming information to write their own newspaper report. Children have used 2Connect to mind-map ideas for a community campaign. Children have used these ideas to write a persuasive letter or poster as part of the campaign. Children have assessed their texts using criteria to judge their suitability for the intended audience.		make more complex and imaginative animations. Children know what stop motion animation is and how it is created. Children have used ideas from existing stop motion films to recreate their own animation. Children have shared their animations and commented on each other's work using display boards and blogs in Purple Mash.	Children can predict what shapes will be made from Logo instructions. Children can create shapes using the Repeat function. Children can find the most efficient way to draw shapes. Children can use the Build feature. Children can create 'flowers' using Logo.	
Vocabulary	Computer Virus, Cookies, Copyright, Digital Footprint, Email, Identity Theft, Malware, Phishing, Plagiarism, Spam	Action, Alert, Algorithm, Bug, Code Design, Command, Control, Debug/Debugging, Design Mode, Event, Get Input, If, If/Else, Input, Output, Object, Repeat, Selection Simulation, Timer, Variable	Average, Advance Mode Copy And Paste, Columns, Cells, Charts, Equals Tool, Formula, Formula Wizard, Move Cell Tool, Random Tool, Rows, Spin Tool Spreadsheet, Timer	Font, Bold, Italic, Underline	Internet, Internet browser, Search, Search engine. Spoof website, Website Easter egg	Animation, Flipbook Frame, Onion skinning Background, Play Sound, Stop motion, Video clip	LOGO, BK, FD, RT, LT REPEAT, SETPC, SETPS, PU, PD	Motherboard, CPU, RAM, Graphics card, Network card, Monitor, Speakers, Keyboard and mouse

Computing Knowledge, Skills and Vocabulary						
Year 5	**5.2**	**5.1**	**5.3**	**5.5**	**5.6**	**5.8**
Trips and experiences linked to Computing: Children to use iPad's to take photographs of trips and experiences. Children to use iPad's to take video's and record voice about trips and experiences. Children to talk about and record the different technologies they see in use on trips.						
Area of Learning	Online Safety	Coding	Spreadsheets	Game Creator	3D Modelling	Word Processing
Knowledge	To gain a greater understanding of the impact that sharing digital content can have. To review sources of support when using technology. To review children's responsibility to one another in their online behaviour. To know how to maintain secure passwords. To understand the advantages, disadvantages, permissions and purposes of altering an image digitally and the reasons for this. To be aware of appropriate and inappropriate text, photographs and videos and the impact of sharing these online. To learn about how to reference sources in their work To search the Internet with a consideration for the reliability of the results of sources to check validity and understand the impact of incorrect information. Ensuring reliability through using different methods of communication	To review coding vocabulary. To use a sketch or storyboard to represent a program design and algorithm. To use the design to create a program. To design and write a program that simulates a physical system. To review the use of number variables in 2Code. To explore text variables. To create a playable, competitive game. To combine the use of variables, If/else statements and Repeats. To achieve the desired effect in code. To read code so that it can be adapted, personalised and improved. To explore the launch command and use buttons within a program that launch other programs or open websites. To create a program to inform others.	To use conversions of measurements. To use the count tool. To formulae including the advanced mode. To use text variables to perform calculations. To use a spreadsheet to plan an event.	To set the scene. To create the game environment. To create the game quest. To finish and share the game. To evaluate their and peers' games.	To be introduced to 2Design and Make. To explore the effect of moving points when designing. To understand designing for a purpose. To understand printing and making.	To make a document from a blank page. To insert images: Considering Copyright To edit images. To add the text finishing touches To share files. To present information using tables. To write a letter using a template.
Skills	Children know what Childnet SMART CREW is and have thought critically about the information that they share online both about themselves and others. Children know who to tell if they are upset by something that happens online. Children can use the SMART rules as a source of guidance when online. Children think critically about what they share online, even when asked by a usually reliable person to share something. Children have clear ideas about good passwords.	Children can use sketching to design a program and reflect upon their design. Children can create code that conforms to their design. Children can explain how their program simulates a physical system. Children can select the relevant features of a situation to incorporate into their simulation by using decomposition and abstraction. Children can reflect upon the effectiveness of their simulation. Children can explain what a variable is in programming.	Children can create a formula in a spreadsheet to convert m to cm. Children can apply this to creating a spreadsheet that converts miles to km and vice versa. Children can use a spreadsheet to work out which letters appear most often. Children can use the 'how many' tool. Children can use a spreadsheet to work out the area and perimeter of rectangles. Children can use these calculations to solve a real-life problem. Children can create simple formulae that use different variables.	Children can review and analyse a computer game. Children can describe some of the elements that make a successful game. Children can begin the process of designing their own game. Children can design the setting for their game so that it fits with the selected theme. Children can upload images or use the drawing tools to create the walls, floor and roof. Children can design characters for their game. Children can decide upon, and change, the animations and sounds that the characters make.	Children know what the 2Design and Make tool is for. Children have explored the different viewpoints in 2Design and make whilst designing a building. Children have adapted one of the vehicle models by moving the points to alter the shape of the vehicle while still maintaining its form. Children have explored how to edit the polygon 3D models to design a 3D model for a purpose. Children have refined one of their designs to prepare it for printing. Children have printed their design as a 2D net and then created a 3D model.	Children know what a word processing tool is for. Children will be able to create a word processing document, altering the look of the text and navigating around the document. Children know how to add images to a document. Children know the correct way to search for images that they are permitted to reuse. Children know how to attribute the original artist of an image. Children can edit their images within Docs to best present them alongside text. Children understand wrapping of images and text.

	Children can see how they can use images and digital technology to create effects not possible without technology. Children have experienced how image manipulation could be used to upset them or others even using simple, freely available tools and little specialist knowledge. Children can cite all sources when researching and explain the importance of this. Children select keywords and search techniques to find relevant information and increase reliability Children show an understanding of the advantages and disadvantages of different forms of communication and when it is appropriate to use each.	Children can set/change the variable values appropriately. Children know some ways that text variables can be used in coding. Children can create a game which has a timer and score pad. Children can use variables to control the objects in the game. Children can create loops using the timer and If/else statements. Children can include buttons and objects that launch windows to websites and programs. Children can code a program that informs others.	Children can create a formula that will work out how many days there are in x number of weeks or years. Children can use a spreadsheet to model a real-life situation and come up with solutions that can be practically applied.	Children can make their game more unique by selecting the appropriate options to maximise the playability. Children can write informative instructions for their game so that other people can play it. Children can evaluate my their own and peers' games to help improve their design for the future.	Children have explored the possibilities of 3D printing.	Children can add appropriate text to their document, formatting in a suitable way. Children can use styles to format a document. Children can use bullet points and numbering. Children can add text boxes and shapes. Children can use page breaks, headers and footers. Children can add hyperlinks to places in the document and to an external website. Children can add an automated contents page. Children can share their documents with selected users. Children understand the different permissions when sharing in Google docs. Children can share using a share link. Children can create a vector drawing in their document. Children can add tables to present information. Children can edit properties of tables including borders, colours, merging cells, adding and removing rows and columns. Children can use a template and edit it appropriately. Children can use the spelling and grammar tools built into Google docs.
Vocabulary	Online Safety, Smart Rules, Password, Reputable, Encryption Identity Theft, Shared Image, Plagiarism, Citations, Reference, Bibliography	Action, Alert, Algorithm, Bug, Code Design, Command, Control Debug/Debugging, Design Mode, Event, Get Input, If, If/Else, Input, Output, Object, Repeat, Sequence, Selection, Simulation, Timer, Variable	Average, Advance Mode, Copy and Paste, Columns, Cells, Charts, Equals Tool, Formula, Formula Wizard, Move Cell Tool, Random Tool, Rows Spin Tool, Spreadsheet, Timer	Animation, Computer game, Customise, Evaluation, Image Instructions, Interactive, Screenshot Texture, Perspective, Playability	CAD – Computer aided Design Modelling, 3D, Viewpoint, Polygon 2D, Net, 3D Printing, Points, template	Copyright, Text formatting, In-built styles, Cursor, Text wrapping, Merge cells, Document, Textbox Paragraph formatting, Font, Word Processing tool, Readability, Template

Computing Knowledge, Skills and Vocabulary							
Year 6	**6.2**	**6.6**	**6.1**	**6.9**	**6.5**	**6.4**	**6.7**

Trips and experiences linked to Computing: Children to use iPad's to take photographs of trips and experiences. Children to use iPad's to take video's and record voice about trips and experiences. Children to talk about and record the different technologies they see in use on trips.

Area of Learning	Online Safety	Networks	Coding	Spreadsheets	Text Adventures	Blogging	Quizzing
Knowledge	To identify benefits and risks of mobile devices broadcasting the location of the user/device, e.g. apps accessing location. To identify secure sites by looking for privacy seals of approval, e.g. https, padlock icon. To identify the benefits and risks of giving personal information and device access to different software. To review the meaning of a digital footprint and understand how and why people use their information and online presence to create a virtual image of themselves as a user. To have a clear idea of appropriate online behaviour and how this can protect themselves and others from possible online dangers, bullying and inappropriate behaviour. To begin to understand how information online can persist and give away details of those who share or modify it. To understand the importance of balancing game and screen time with other parts of their lives, e.g. explore the reasons why they may be tempted to spend more time playing games or find it difficult to stop playing and the effect this has on their health. To identify the positive and negative influences of technology on health and the environment.	To discover what the children know about the internet. To find out what a LAN and a WAN are. To find out how we access the internet in school. To research and find out about the age of the internet. To think about what the future might hold.	To review good planning skills. To design programs using their choice of objects, attributing specific actions to each using their new programming knowledge. To use variables within a game to keep track of the properties of objects. To use functions and understand why they are useful in 2Code. To debug a program and organise the code into tabs. To organise code into functions and Call functions to eliminate surplus code in the program. To explore the options for getting text input from the user in 2Code. How to include interactivity in programming. To use flowcharts to test and debug a program. To create a simulation of a room in which devices can be controlled. To explore how 2Code can be used to make a text-based adventure game.	What is a Spreadsheet? To use basic calculations. To use Modelling. To organising data. To use advanced formulae and big data To create and use charts and graphics. To use a spreadsheet to plan a Cake Sale. To use a Spreadsheet to solve problems.	To find out what a text adventure is. To plan a story adventure. To make a story-based adventure. To introduce map-based text adventures. To code a map-based text adventure.	To identify the purpose of writing a blog. To identify the features of successful blog writing. To plan the theme and content for a blog. To understand how to write a blog. To consider the effect upon the audience of changing the visual properties of the blog. To understand the importance of regularly updating the content of a blog. To understand how to contribute to an existing blog. To understand how and why blog posts are approved by the teacher. To understand the importance of commenting on blogs. To peer-assess blogs against the agreed success criteria.	To make a picture quiz for young children. To learn how to use the question types within 2Quiz. To explore the grammar quizzes. To make a quiz that requires the player to search a database. Are you smarter than a 10- (or 11-) year-old? To make a quiz to test your teachers or parents.
Skills	Children have used the example game and further research to refresh their	Children know the difference between the	Children can plan a program before coding to anticipate the	Children know some uses of a spreadsheet tool.	Children can describe what a text adventure is.	Children understand how a blog can be used as an informative text.	Children have used the 2DIY activities to create a picture-based quiz.

memories about risks online including sharing location, secure websites, spoof websites, phishing and other email scams. Children have used the example game and further research to refresh their memories about the steps they can take to protect themselves including protecting their digital footprint, where to go for help, smart rules and security software. Children understand how what they share impacts upon themselves and upon others in the long-term. Children know about the consequences of promoting inappropriate content online and how to put a stop to such behaviour when they experience it or witness it as a bystander. Children can take more informed ownership of the way that they choose to use their free time. They recognise a need to find a balance between being active and digital activities. Children can give reasons for limiting screen time. Children can talk about the positives and negative aspects of technology and balance these opposing views.	World Wide Web and the internet. Children know about their school network. Children have researched and found out about Tim Berners-Lee. Children have considered some of the major changes in technology which have taken place during their lifetime and the lifetime of their teacher/another adult.	variables that will be required to achieve the desired effect. Children can follow through plans to create the program. Children can debug when things do not run as expected. Children can explain what functions are and how they can be created and labelled in 2Code. Children can explain how to move code from one tab to another in 2Code. Children can explain how they organised code in a program into functions to make it easier to read. Children can code programs that take text input from the user and use this in the program. Children can attribute variables to user input. Children are aware of the need to code for all possibilities when using user input. Children can follow flowcharts to create and debug code. Children can create flowcharts for algorithms using 2Chart. Children can be creative with the way they code to generate novel visual effects. Children can follow through the code of how a text adventure can be programmed in 2Code. Children can adapt an existing text adventure to make it unique to their requirements.	Children can navigate around a spreadsheet using cell references. Children can enter data into cells. Children understand new vocabulary relating to spreadsheets: cells, columns, rows, cell names, sheets, workbook. Children can use a spreadsheet to carry out basic calculations including addition, subtraction, multiplication and division formulae. Children can use the series fill function. Children recognise how using formulae allows the data to change and the calculations to update automatically. Children can use a spreadsheet to model a situation. Children can use a spreadsheet to solve a problem. Children can use the SUM function. Children can use a variety of methods including flash fill, convert text to tables and splitting cells for organising and presenting their data in a spreadsheet. Children know what is meant by a delimiter. Children understand how to sort data. Children know how to incorporate formulae for percentages, averages, max and min into their spreadsheets. Children gain familiarity with range notation. Children know some shortcuts that help to make data meaningful. Children begin to develop a critical eye when it comes to the conclusions that can be made from data. Children know that there are ways to represent their data graphically and that spreadsheets can make the	Children can map out a story-based text adventure. Children can use 2Connect to record their ideas. Children can use the full functionality of 2Create a Story Adventure mode to create, test and debug using their plan. Children can split their adventure-game design into appropriate sections to facilitate creating it. Children can map out an existing text adventure. Children can contrast a map-based game with a sequential story-based game. Children can create their own text-based adventure based upon a map. Children can use coding concepts of functions, two-way selection (if/else statements) and repetition in conjunction with one another to code their game. Children make logical attempts to debug their code when it does not work correctly.	Children understand the key features of a blog. Children can work collaboratively to plan a blog. Children can create a blog with a specific purpose. Children understand that the way in which information is presented has an impact upon the audience. Children understand that blogs need to be updated regularly to maintain the audience's interest and engagement. Children can post comments and blog posts to an existing class blog. Children understand the approval process that their posts go through and demonstrate an awareness of the issues surrounding inappropriate posts and cyberbullying. Children can comment on and respond to other blogs. Children can assess the effectiveness and impact of a blog.	Children have considered the audience's ability level and interests when setting the quiz. Children have shared their quiz and responded to feedback. Children understand the different question types within 2Quiz. Children have ideas about what sort of questions are best suited to the different question types. Children have used 2Quiz to make and share a science quiz. Children have considered the audience's ability level and interests when setting the quiz. Children have shared their quiz with peers. Children have given and responded to feedback. As a class, children have collaborated on a quiz. Children have tried out the different types of Text Toolkit grammar games. Children have chosen an appropriate Text Toolkit tool to make their own grammar game. Children have used a 2Investigate quiz to answer quizquestions. Children have designed their own quiz based on one of the 2Investigate example databases. Children have used their knowledge of quiz types to create a quiz show quiz based on a curriculum area.

			process of representing data easier. Children gain an understanding of how a graphical representation can make data easier to interpret. Children make a variety of charts using Sheets. Children illustrate their data using sparklines and data bars. Children can understand how a spreadsheet can be used to plan an event. Children understand the advantages of using formulae when data is subject to change. Children have modelled a real-life situation using a spreadsheet. To apply all new spreadsheet skills to solving problems and presenting data. To explore printing spreadsheets.			
Vocabulary	Digital Footprint, Password PEGI Rating, Phishing, Screen Time, Spoof Website	Internet, World Wide Web Network, Local area network (LAN), Wide area network (WAN), Router Network cables, Wireless	Action, Alert, Algorithm, Bug, Code Design, Command, Control, Debug/ Debugging Event, Function, If, If/Else, input, Output, Object, Repeat, Sequence, Selection, Simulation Tabs, Timer, Variable	Alignment, Style, Formula(e), Sum, Calculate, Function, Text Wrapping, Cell, Range, Value Cell reference, Row, Workbook Chart, Spreadsheet, Column	Text-based adventure, Concept map, Debug, Sprite, Function	Audience, Blog, Blog page Blog post, Collaborative, Icon	Audience, Collaboration, Concept map, Database, Quiz