



Computing Medium Term Plan - Year 3/4 - Cycle B

	Autumn 1 -Coding	Autumn 2 - Online Safety	Spring 1 - Spreadsheets	Spring 2 -Graphic Design	Summer 1 -Searching	Summer 2 - Hardware
Big concepts						
Big questions	How can variables and if/else statements be useful when coding programs with selection? What do the terms decomposition and abstraction mean?	What is meant by a digital footprint? What is SPAM? What is meant by plagiarism?	How would you add a formula so that the cell shows the percentage score for a test? Which tools would you use to create a timed times tables test in 2Calculate?	What is Logo? What is an animation? What is meant by onion skinning? What is meant by stop frame animation?	What is a search engine?	What is the difference between hardware and software?
Vision and rationale	Children will understand how to use selection in coding with the 'if/else' command and learn the importance of different variables. They will then use this to use knowledge to create flow charts for design of algorithms including selection.	Children will understand how they can protect themselves from online identity theft. They will Understand that information which is put online leaves a digital footprint or trail and that this can aid identity theft. Children will identify the risks and benefits of installing software including apps. They will understand that copying the work of others and presenting it as their own is called 'plagiarism' and to consider the consequences of plagiarism. Pupils will identify the positive and negative influences of technology on health and the environment.	Children will have to practise formatting cells as currency, percentage, decimal to different decimal places or fraction. They will be using the formula wizard to calculate averages, combining tools to make spreadsheet activities such as timed times tables tests. Pupils will be using a spreadsheet to model a real life situation and add a formula to a cell to automatically make a calculation in that cell.	Children will learn the structure of the coding language of Logo. They will input simple instructions in Logo and Use 2Logo to create letter shapes, whilst also using the Repeat function in Logo to create shapes. Children will then use all of the skills they have learnt to build procedures in Logo.	Children will be able to locate information on the search results page. They will be able to use search effectively to find out information and assess whether an information source is true and reliable.	Children will understand the different parts that make up a computer and eventually be able to recall the different parts that make up a computer.
Prior knowledge	- Introducing block coding - Objects and actions - Events (Click event, sound output) - Executing a program - Algorithms - Logical decision making - Sequencing instructions - Following instructions - Creating programs using sequencing and repeat.	- Safe logins - Concept of privacy - Concept of ownership - The need to logout - Developing ideas about the concept of technology that we are surrounded by and its purpose. - Approval process - Sharing online - Email simulations - emotional impact of communications - digital footprint - Search engine - Privacy	- Spreadsheet navigation - Adding images - Vocab: cell, column, row - Representing data - Copying and pasting - Totalling tools - Addition - Table layout - Block graph	- Logical decision making - Sequencing instructions - Following instructions - Visual use of the Logo programming language. - Program logic and structure - Familiarity with a code environment - Logical planning of sequences - Debugging skills - Logical decision processing - Forward planning to achieve a solution	- Safe logins - Developing ideas about the concept of technology that we are surrounded by and its purpose. - Sharing to a display board - Sharing online - Digital footprint - Exploration of what the Internet is - Accessing the World Wide Web - Digital Footprint - Searching and sharing	- Developing ideas about the concept of technology that we are surrounded by and its purpose - Understanding that many devices use computational technology. - Exploration of what the Internet is and how devices allow connections to access functions and the World Wide Web - Searching and sharing



Computing Medium Term Plan - Year 3/4 - Cycle B

Key Vocabulary	Action, Alert, Algorithm, Code Design , Control, Command, Debug/Debugging, Design Mode, Event, Flowchart Bug, Get Input, If, If/Else, Input, Object, Repeat, Selection, Computer simulation, Simulation, Timer, Variable	Computer virus, Cookies, Copyright, Digital footprint, Email, Identity theft, Malware, Phishing, Plagiarism, Spam	Average, Advance mode, Copy and Paste, Columns, Cells, Charts, Equals tool, Formula, Formula Wizard, Move cell tool, Random tool, Rows, Spin Tool, Spreadsheet, Timer	LOGO, BK, FD, LT, RT, REPEAT, SETPC, SETPS, PU, PD, Animation, Background, Frame, Flipbook, Onion skinning, Stop motion, Play, Sound, Video clip	Easter egg, Internet, Internet browser, Search, Search engine, Website, Spoof website	Motherboard, CPU, RAM, Graphics card, Network card, Monitor, Speakers, Keyboard and mouse
Key Resources	Tools 2Dos 2Chart Free code gibbon	2Connect 2Investigate SPAM	2Calculate	Logo 2Animate	2Publish Plus Google, Yahoo!, Ask, msn, Bing, About, Search	2Connect 2Quiz
Computing skills	Computer science: - I can make more intuitive attempts to debug my own programs. - I understand 'if statements' for selection and attempt to combine these with other coding structures. - I can make use of user inputs and outputs such as 'print to screen'. - I can trace code and use step through methods to identify errors in code. - I can 'read' programs with several steps and predict the outcome accurately. - I can recognise the main component parts of hardware which allow computers to join and form a network. Information technology: - I understand the function, features and layout of a search engine. - I can appraise selected webpages for credibility and information at a basic level. - I can make improvements to digital solutions based on feedback. - I can make informed software choices when presenting information and data. Digital literacy: - I can explore key concepts relating to online safety using concept mapping. - I can help others to understand the importance of online safety. - I know a range of ways of reporting inappropriate content and contact.					