Class 1 - Computing

	Cycle A	Cycle B
A1	**Simple Algorithms** Know that an algorithm is a set of instructions to complete a task. *Know that an algorithm is a set of instructions used to solve a problem or achieve an objective* Know that an algorithm written for a computer is called a program. *Know how to create an algorithm for a specific purpose* Place instructions into the correct order (sequence) to make something work Know how to write a simple algorithm to achieve a specific purpose Know what is wrong with a simple algorithm when the steps are out of order (bug), e.g. The Wrong Sandwich Know instructions can be changed to fix a problem (debug), *Know how to identify and correct errors and explain what has been done.*	**Simple Algorithms** Know that an algorithm is a set of instructions to complete a task. *Know that an algorithm is a set of instructions used to solve a problem or achieve an objective* Know that an algorithm written for a computer is called a program. *Know how to create an algorithm for a specific purpose* Place instructions into the correct order (sequence) to make something work Know how to write a simple algorithm to achieve a specific purpose Know what is wrong with a simple algorithm when the steps are out of order (bug), e.g. The Wrong Sandwich Know instructions can be changed to fix a problem (debug), *Know how to identify and correct errors and explain what has been done.*
A2	**Scratch Jnr** Know how to create a simple program using event, object and action blocks. Know to read code one line at a time. Know what might happen in a simple program. *Know when designing code they need to be precise with the algorithm so that it can be successfully converted in to code.* Know that an algorithm is a set of instructions used to solve a problem or achieve an objective. *Know how to create an algorithm for a specific purpose.* Know what might happen in a simple program *Know designs have to be logical, programmable steps.* Know computers store and follow instructions. Know how different technology helps us.	**Scratch Jnr** Know how to create a simple program using event, object and action blocks. Know to read code one line at a time. Know what might happen in a simple program. *Know when designing code they need to be precise with the algorithm so that it can be successfully converted in to code.* Know that an algorithm is a set of instructions used to solve a problem or achieve an objective. *Know how to create an algorithm for a specific purpose.* Know what might happen in a simple program *Know designs have to be logical, programmable steps.* Know computers store and follow instructions. Know how different technology helps us.
Sp1		
Sp2	**Safer Internet** Know what personal information is and why we need to keep personal information private. Know when and where to go for help when concerned. *Know computers store and follow instructions.* Know how different technology helps us. *Know the dangers of sharing photos online.* *Know people online are not always who they say they are.* *Know not all information online is true* *Know the importance of being responsible when online.* *Know a webpage displays information in different ways: text, images, videos and interactive elements.* *Know the internet can be used to find answers to questions* Know what technology is. Know the types of technology in school.	**Safer Internet** Know what personal information is and why we need to keep personal information private. Know when and where to go for help when concerned. *Know computers store and follow instructions.* Know how different technology helps us. *Know the dangers of sharing photos online.* *Know people online are not always who they say they are.* *Know not all information online is true* *Know the importance of being responsible when online.* *Know a webpage displays information in different ways: text, images, videos and interactive elements.* *Know the internet can be used to find answers to questions* Know what technology is. Know the types of technology in school.

Su1	**Exploring Technology** Know how to control the mouse by dragging, clicking and resizing. Know basic keys on a keyboard Know work can be saved and retrieved later. Know images and text can be used together Know words can be types and use capital letters and simple punctuation keys Know music can be made on a computer using patterns Know how to take photographs Know computers can be used to design *Know text can be altered.* *Know text can be resized and changed.* *Know how to create, name, save and retrieve work.* *Know that folders are used to organise files on a computer.* *Know software can be used to create stories* *Know that music can be composed on a computer* Know different tools make different effects in art programs.	**Exploring Technology** Know how to control the mouse by dragging, clicking and resizing. Know basic keys on a keyboard Know work can be saved and retrieved later. Know images and text can be used together Know words can be types and use capital letters and simple punctuation keys Know music can be made on a computer using patterns Know how to take photographs Know computers can be used to design *Know text can be altered.* *Know text can be resized and changed.* *Know how to create, name, save and retrieve work.* *Know that folders are used to organise files on a computer.* *Know software can be used to create stories* *Know that music can be composed on a computer* Know different tools make different effects in art programs.
Su2		

Key Area	Key Vocabulary (Class 1)
Computer Science	Algorithm, instructions, code, program, debug
Information Technology	Digital, saved, retrieved, edit, images, text, files
Digital Literacy	Technology, on-line, internet, interactive, safety

Class 2 - Computing

	Cycle A	Cycle B
A1	**Stop Motion Animation** Know what a variable is and use variables in a program Know digital devices can be used to record Know images and text can be used together to create a storyboards and comics digitally. Know animations can be created by adding music, sounds and text with transitions e.g. stop motion.	**Microsoft Word** Know text and images can be copied and pasted Know words can be replaced (spell check/thesaurus). Know what an infographic is and why they are used.
A2	**Microsoft Excel** Know there are different ways to solve a problem. Know more complex code can be read and explain what is happening. Know and use a branching database. Know videos can be edited by adding music, sounds and text with transitions e.g. imovie and exported. Know what an ebook is and how to create one. Know about, create and use a digital spreadsheet and create graphs using these.	
Sp1		**Scratch** Know how to design and code a program that follows a simple sequence using repeat and timers to accomplish specific goals. Know how to test and improve/debug programmed sequences Know how specific algorithms work (reading flowcharts), and predict outcomes Know selection (if else) blocks give different outcomes. Know how to design and use an algorithm to sequence and order more complex programming with 'if'. Know errors in code can be identified by going through each step and make logical attempts to correct this. Know how to program a loop and shapes in logo. Know how to use co- ordinates and repeat command in logo.
Sp2	**Garage Band** Know loops repeat/forever to achieve solutions to tasks Know more complex music can be created. Know digital music can be changed using rhythm, pitch and melody.	
Su1	**E-Safety** Know what to do if something upsets you online. Know why and how people can be nasty online. Know the term 'sharing online' and why we need to get permission to share photos and videos of other people. Know why people pretend to be someone else online. Know why we only talk to people we know in the real world, when online.	**Microsoft Powerpoint** Know bullet points can be used in lists. Know 3D models can be created on a computer. Know a range of media can be used together in digital content including photos, text and sound. Know more complex 3D models can be created on a computer Know that when information is taken from the internet the source should be referenced (plagiarism).

	Know why we should not always trust what we read online and how to check reliability. Know the importance of being kind in the real world and online. Know the importance of using avatars and how to make them. Know the ways the internet helps us to communicate. Know the importance of playing age appropriate games.	Know that digital content needs to be evaluated. Know that information on the internet needs cross-referencing. Know that memory is measured in bytes and gigabytes.
Su2		**E-Safety** Know what makes a good password. Know what an email is. Know how to use search technologies to find specific pieces of information. Know the features of an Internet Browser. Know that search filters can be used on websites to find suitable information. Know what 'phishing' means. Know what 'malware' and 'viruses' are and what they can do. Know the importance of having a balance between digital and active activities.

Key Area	Key Vocabulary (Class 2)
Computer Science Information Technology Digital Literacy	Columns, rows, copy, paste, cells, wrap text, crop, charts, tables, spreadsheet, PowerPoint, document, slides, inputs, outputs, algorithms, fonts, bold. Italics, size, underline, monitor, keyboard, mouse, cookies, computer virus, worldwide web, browser, internet explorer, Google, phishing, copyright, digital footprint, spam, plagiarism, action, bug, command, control, repeat, loop, selection, insert, animation, background, sound, stop-motion, video clip.

Class 3 - Computing

	Cycle A	Cycle B
A1	**Digital Literacy (E-Safety)** *Know what they share, impacts upon themselves and upon others in the long-term.* Know how to use email safely. *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.* Know the SMART rules. Know the importance of what we share online and how this can be manipulated. *Know reasons for limiting screen time.* Know the advantages and disadvantages of different forms of online communication. *Know the positives and negative aspects of technology and balance these opposing views.*	**Digital Literacy (E-Safety)** *Know what they share, impacts upon themselves and upon others in the long-term.* Know how to use email safely. *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.* Know the SMART rules. Know the importance of what we share online and how this can be manipulated. *Know reasons for limiting screen time.* Know the advantages and disadvantages of different forms of online communication. *Know the positives and negative aspects of technology and balance these opposing views.*
A2	**Microsoft Word** Know word processing documents can be used for different purposes and manipulated and edited accordingly.	**Websites** *Know websites can be created.*
Sp1		**Editing Photos** *Know photos/screenshots can be edited.*
Sp2	**Microsoft Excel** Know formulas can be used in spreadsheets *Know digital spreadsheets can be used to problem solve in the 'real world'.*	**Garage Band** **Digital Composition** Know music can be layered with sounds and effects.
Su1	**Computer networks, the internet and world wide web** Know what a database is, how to search a database and create own databases. Know what computer networks, Internet and the Cloud are and how they help us. Know key words can be used to increase search reliability.	**Programming (Computer Science)** Know a program can be created to represent a physical system. *Know what binary is.* Know functions can be created and used in code to make programming more efficient.

	Know the difference between the world wide web and the internet. Know how to report something they have seen online including via the platform.	Know numbers can be converted to binary.
Su2	**Programming (Computer Science)** Know simplified code can be used to make their programming more efficient. *Know a program can be created that uses multiple functions*. Know use their plan to program the simulation to work. *Know how their code executes when their program is run.* Know a task can be broke down into smaller achievable steps. *Know flowcharts can be followed to create and debug code.* Know 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. *Know that programs can be coded that take text input from the user and use this in the program.* Know that programs can be coded that take text input from the user and use this in the program. *Know variables can attribute to user input.*	

Key Area	Key Vocabulary (Class 3)
Computer Science	Simplified, code, efficient, flowcharts, debug, abstraction, variables, binary, program, contribute, functions, code, loop, bug, output, sequence, input, algorithm
Information Technology	Microsoft Excel: Database, formula, spreadsheet, cells, rows, columns, function, formulae, data, results, sum, average, min, max.

	Garage Band: layered, sound effects, track, fade-out, live audio, loop browser, tempo Microsoft Word: word processing, edited, manipulated, undo, align text, format font, insert, keyboard shortcuts, bullets and numbering, snipping, text boxes. Editing Photos: photos, screenshots, Photography, Capturing, Editing, Cropping, Enhancing, Ethics, Landscape, portrait, brightness, straighten, exposure, vibrancy, Website, web page, browser, media, Hypertext Markup Language (HTML)
Digital Literacy	Networks, internet, the cloud, key words, search reliability, platform, report, screen-time, online communication, inappropriate content, bystander