St Stephen Churchtown Academy

Progression Overview ICT and COMPUTING

	PROGRAMING	Controlling hardware and machines	*Operate, Understand and Implement*	*Multimedia and Sound*
Nursery	I can help an adult operate equipment I can use simple software to make some thing happen I can press buttons on a robot (Beebot) and talk about how it moves I can follow adults and peers' instructions to move myself	I can access apps on an ipad I can name some of the parts of devices - buttons R – I can use a keyboard	I can use a mouse or iPad screen to move objects I can use apps to support my learning	I can use a camera on a device I can use paint programs to create pictures I can record my self and friends (sound buttons)
Reception				
Year 1	I can understand and create algorithms (steps or rules as instructions, e.g. how to make a sandwich) I understand that algorithms must be precise and unambiguous	I can identify the major parts of digital devices (e.g. keyboard, screen, power, batteries, touchscreen)	I can use apps and websites to aid my learning I can save and retrieve work that I have produced (includes auto-save) I can move a cursor with the trackpad and click on an icon	I can use technology to capture photos (e.g. with an iPad)
Year 2	I can predict the behaviour of simple programs I can create and run a program (an algorithm or multiple algorithms that can be understood by a computer) I can debug (find and fix a problem) within a simple program	I understand that digital devices run programs that have been created by humans	I can type and edit text I can use two-finger scrolling on a touchpad I can use the shift key to create capital letters I understand that emails and other digital communications can be sent and received from various types of digital device	I can use technology to capture and manipulate (position, re-size, rotate) photos as part of a piece of work
Year 3	I can use selection in my programs. (Also known as conditionals or If / Then statements). (e.g. if a character moves onto a yellow square, then gain two points)	I can control or simulate programmable hardware (e.g. a Sphero robot)	I know how to search for items on the internet I can use technology to organise and manipulate digital content I can type to achieve a specific goal	I can create video as part of my learning (e.g. using an iPad) I can create an animation (e.g. stop-frame animation on an iPad)

	I can create variables within my programs (e.g. a timer, score)		I understand how to type a space after a punctuation mark. I can perform a two-finger click to access additional options	
Year 4	I can use repetition (sometimes referred to as loops) in my programs. I can debug programs multiple times to accomplish specific goals	I can identify inputs of common computing devices (e.g keys on a keyboard, temperature sensor, tilting a device) I can identify the outputs of common computing devices (e.g. display on a screen, Bluetooth signal, print)	information or data to a group or audience I can type to achieve a specific goal, including accurate punctuation and spelling check I can use technical vocabulary to describe how computing equipment and networks function, including storage (e.g. USB drives, Google drive), apps and the world wide web	I can create sound, music or a podcast using digital technology I can create a 3D graphic using computer-aided design software (e.g. using TInkercad)
Year 5	I can write code that performs calculations with variables (e.g. every time a coin is collected, add one point to the score) I can decompose (break into smaller chunks) a programming problem	I can create code that acts on multiple inputs I can create code that produces multiple outputs	I can edit and improve on-screen writing, including digital thesaurus use I can collaborate meaningfully with networked technologies (for example, within a shared document or shared workspace) I can combine a variety of software (programs that run on computers) to accomplish given goals	I can edit video, bringing together different media elements (e.g. stills, video, captions and sound) to produce an effective final product I can storyboard and create an animation
Year 6	I can use a random function in my code for purposeful effect (e.g. a program randomly chooses a number from 1-4 and displays a corresponding statement) I can produce a multi-function, debugged program that uses variables, selection and repetition.	I can program and debug multiple functions on programmable hardware (e.g. with a Microbit)	I can collect and analyse data or information using technology (e.g. use a spreadsheet to produce a graph) I can make document layout and design decisions based on purpose (e.g. format a formal letter) I can re-order on-screen sentences for clarity, purpose or effect	I can design, create and edit sound, music, or a podcast using digital technology I can design, create and modify 3D graphics for purpose using computer-aided design software (e.g. using Tinkercad)