



Cliftonville ICT Curriculum Endpoints

By the end of Y1:

- know that an algorithm is a sequence of instructions
- create a Bee Bot program using a sequence of instructions before running it using the Go button
- with support, film a recipe demonstration
- with support, make a PPT with words and pictures
- with support, upload a file (film and PPT) to the G-Drive and retrieve it at a later date
- know that information stored on the web or transmitted via the internet is available to other people
- search online using the alphabet to find items on a children's directory site
- recognize the kind of information that is private and know not to share it on the internet
- know what they should do if they find an inappropriate image (close the lid of the laptop and tell an adult).

By the end of Y2:

- create a program with a goal on screen as a sequence of instructions using ScratchJr and Light Bot (prepared sprites)
- explain how to debug any errors in their code as they create their programs on ScratchJr and Light Bot
- explain what a program will do under given circumstances based on logical reasoning
- use ipads to photograph minibeasts; and store, organise and retrieve the images
- use questions to sort and classify objects (minibeasts)
- take and edit photographs to create a presentation
- know that there are a number of purposes for which IT is used beyond school and be able to list some of them
- explain why they should use filtered SafeSearch when looking for images on the web
- explain why they should observe age restrictions on games.

By the end of Y3:

- create an outline plan for an online survey-based project
- design and write a program with a sequence of commands in an appropriate order using a block language, without user interaction
- explain a simple, sequence-based algorithm in their own words
- identify errors in programs by reasoning logically about the program code
- know that computer networks transmit information, including emails and video-conferencing, in a digital (binary) format
- use Google Slides and Google sheets on chromebooks with a degree of independence
- plan and write survey questions, collect results and create a presentation based on the results
- know how to report inappropriate behaviour when using technology in school to their teacher, the network manager or another trusted adult
- know how to post comments in an appropriate way (Google classroom).

By the end of Y4:

- write a program for a game in Scratch in which the user has to provide some input by using key presses or the mouse
- use sequence and repetition in their game created in Scratch, including sequences of commands or blocks and some repetition
- write a program that accepts keyboard input and produces on-screen output
- identify and explain how an algorithm, using both sequence and repetition works

- identify, give reasons for, correct and test errors that they find in programs using their knowledge of program code
- plan and execute a project using software on an iPad to create an animation with sound, with some degree of independence
- create a 3D computer model
- create a virtual representation of a landscape/habitat
- describe the difference between acceptable and unacceptable behaviours when using digital technology for filming and the use of others' original content, such as music samples
- know to report any concerns over, or inappropriate behaviour with, digital technology to their parents, their teacher or with another trusted adult.

By the end of Y5:

- describe how HTML is used to create a web page and how it is transmitted as packets of digital data over the internet
- plan how to make a webpage, using decomposition to break the problem down and solve it by working through the elements they have identified
- use sequence and repetition in the construction of the code for their webpage and use logical reasoning to detect errors in algorithms
- evaluate the quality of information located (text, audio, images and video), looking for bias or questioning assumptions that have been made
- use multiple digital devices (chromebooks, ipads) to take photographs and films; and upload them to their webpages
- use built-in search tools to filter results from a search engine, such as by time, location or reading level
- create a presentation using features of Google Slides, using information that has been researched
- know about the importance of encrypted (HTTPS) connections when browsing the web and of using strong passwords to protect their identity online
- know that they can also report inappropriate behaviour to those running websites which they regularly use, and to ChildLine, CEOP or to the police
- describe how to act responsibly when creating, editing or commenting on web pages or blog posts.

By the end of Y6:

- design, write and debug a program using a second programming language based on their own ideas (block coding/javascript), using App Lab (Studio code website)
- plan how to make a smartphone app, using decomposition to break the problem down and solve it by working through the elements they have identified
- use a combination of sequence, selection, repetition and variables in designing their smartphone app
- describe what a given algorithm does and, using logical reasoning, give precise explanations of how it works
- design and create a smartphone app, taking into account input, output and connectivity, the operating system, the algorithms, code and user interface of their own program
- analyse and evaluate data collected when conducting market research for their smartphone app
- select, use and combine a range of media packages to market their app (PPT, ipads and Green Screen technology)
- evaluate, with justification, the effectiveness of a range of apps
- identify the likely and potential consequences of their actions when developing a smartphone app
- understand the principles underpinning acceptable use of digital technologies, with a focus on smartphones.