Unit 2.1 – We are astronauts
abstraction: computational thinking approach to managing complexity by simplifying things through identifying what is important, and what detail can be hidden **algorithm**: a sequence of precise instructions or steps (sometimes a set of rules) to achieve an objective **bug**: an error or mistake in a program or algorithm, causing the computer or robot to behave in a manner that was not originally intended **code**: instructions (or sometimes rules) that can be understood by a computer **debug**: correct mistakes in a program or algorithm **event**: something that happens within a computer program to cause some particular code to be run, such as an internal message being received or a sprite being tapped by the user **input**: data supplied to a computer, in this case, tapping on the screen of a tablet **output**: information produced by a computer – in this case, moving sprites on a screen, text and audio **parallel processing**: when programs run (or appear to run) simultaneously **program**: sequence of instructions (or sometimes a set of rules) that can be followed by a computer **repetition**: programming construct which allows a group of instructions to be repeated a number of times, or until a certain condition is met **Scratch**: simple, block-based programming language in which programs for characters are built by snapping together code blocks **sprite**: a graphical character in a program that can be given its own sequence of instructions
Unit 2.2 – We are games testers
abstraction: computational thinking approach to managing complexity by simplifying things through identifying what is important, and what detail can be hidden **algorithm**: a sequence of precise instructions or steps (sometimes a set of rules) to achieve an objective **computational thinking**: a way of looking at problems so that the solution can be automated using a computer **input**: data supplied to a computer – in this case, it is a mouse click, keyboard press or tapping on a tablet **output**: information produced by a computer – in this case, it is moving sprites on a screen **parallel processing**: when programs run (or appear to run) simultaneously **pattern recognition**: computational thinking approach in which common aspects of how a system behaves are used to simplify implementing solutions **remix**: to take a project and make changes to its source code **repetition**: programming construct which allows a group of instructions to be repeated a number of times, or until a certain condition is met **Scratch**: simple, block-based programming language in which programs for characters are built by snapping together code blocks **source code**: the code that a particular program follows; the instructions or rules that determine what happens in a game or other application **sprite**: a graphical character in a program that can be given its own sequence of instructions
Unit 2.3 – We are photographers
adjustment: changing the colour values of all or some pixels in an image, e.g. increasing or decreasing brightness, contrast or colour saturation **camera roll**: dedicated directory on iPads where all images are stored; can be shared across multiple devices. **colour value**: combination of red, green and blue values, each on a 0–255 scale, which makes the colour of any given pixel. **crop**: to reduce the size of an image to a smaller, rectangular region. **filter**: standard set of changes made to all the pixels in an image, e.g. 'dramatic' or 'silvertone' **pixel**: picture element – one of the small, square dots that makes up a digital image

rule of thirds: guideline for taking pictures, the horizon should be one-third or two-thirds of the way up a photograph, with the subject matter placed one-third or two-thirds of the way across

sensor: means of getting data from the real world into a computer

Unit 2.4 – We are safe searchers

Google: dominant provider of Internet search, and additional services such as Google Docs and Gmail

Google custom search: the ability, via Google, to create a customised search engine for a predefined list of websites

mind map: visual representation of ideas, showing how these ideas can be connected to one another

presentation: typically a sequence of slides showing text and images accompanied by a spoken commentary

search engine: web-based service that maintains an index of Internet pages, allowing users to identify which pages include particular terms or meet particular criteria, ranking the resulting list in a way that is helpful to its user

Wikipedia: online encyclopaedia edited by its users

Unit 2.5 – We are animators

animation: motion picture made by creating each frame separately, then playing these back in quick succession to create the illusion of movement

background: scenery and other unchanging elements in an animation

character: person (or anthropomorphic animal) taking a role in an animation

flipbook animation: an animation technique where a stick figure (or similar) is drawn in a sequence of poses on the corner of sheets in a pad of paper, which can then be flipped through to create the illusion of movement

frame: a single photograph of the background, characters and props

media assets: graphics, videos, audio, animations, etc. that go into media

onion-skinning: animation tool in which the previous frame is overlaid on the current camera image to facilitate small adjustments from one frame to the next

prop: inanimate object needed in an animation

soundtrack: audio to accompany a film, including dialogue, sound effects and sometimes backing music

stage: the physical area photographed for each frame in the animation, on which background, characters and props are positioned

stop-motion: approach to animation in which each frame is photographed individually, with these frames then played back in quick succession

storyboard: planning tool in which each scene of an animation is drawn out

Unit 2.6 – We are zoologists

binary: a number system that uses two numbers: 0 and 1; binary questions are questions with yes or no answers

binary tree: a way of structuring data where each element has no, one or two child elements: a series of yes/no questions to identify an animal can be represented in this way

branching database: software allowing a series of questions to be created to interactively identify objects

classification key: series of questions (usually of a yes/no type) used to identify an animal or plant

data: structured information gathered for analysis, often, but not always, as numbers

database: a structured collection of data organised so that groups of records can be identified

geolocation data: latitude and longitude (and sometimes altitude) or grid references, which specify the location of something, such as a digital photograph

Global Position System (GPS): this system allows a user to determine their exact location using a network of satellites

pixels: picture element – one of the small, square dots that makes up a digital image

tally charts: used to record data quickly; you record lines in groups of five