	Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 1	**Computing systems and networks – technology around us** **1.** To identify technology **2.** To identify a computer and its main parts **3.** To use a mouse in different ways **4.** To use a keyboard to type on a computer **5.** To use the keyboard to edit text **6.** To create rules for using technology responsibly	**Creating media – digital painting** 1. To describe what different freehand tools do 2. To use the shape tool and the line tools 3. To make careful choices when painting a digital picture 4. To explain why I chose the tools I used 5. To use a computer on my own to paint a picture	**Programming A – Moving a robot** 1. To explain what a given command will do 2. To act out a given word 3. To combine forwards and backwards commands to make a sequence 4. To combine four direction commands to make sequences 5. To plan a simple program 6. To find more than one solution to a problem	**Data and Information – Grouping Data** 1. To label objects 2. To identify that objects can be counted 3. To describe objects in different ways 4. To count objects with the same properties 5. To compare groups of objects 6. To answer questions about groups of objects	**Creating Media – Digital Writing** 1. To use a computer to write 2. To add and remove text on a computer 3. To identify that the look of text can be changed on a computer 4. To make careful choices when changing text 5. To explain why I used the tools that I chose 6. To compare typing on a computer to writing on paper	**Programming B – Programming Animations** 1. To choose a command for a given purpose 2. To show that a series of commands can be joined together 3. To identify the effect of changing a value 4. To explain that each sprite has its own instructions 5. To design the parts of a project 6. To use my algorithm to create a program
	Vocabulary: technology, computer, mouse, trackpad, keyboard, screen, double-click, typing,	**Vocabulary:** paint program, tool, paintbrush, erase, fill, undo, shape tools, line tool, fill tool, undo tool, colour, brush style, brush size, pictures, painting, computers	**Vocabulary:** Forwards, backwards, turn, clear, go, commands, instructions, directions, left, right, plan, algorithm, program, route	**Vocabulary:** Object, label, group, search, image, property, colour, size, shape, value, colour, data set, more, less, most, fewest, the same	**Vocabulary:** word processor, keyboard, keys, letters, type, numbers, space, backspace, text cursor, capital letters, toolbar, bold, italic, underline, mouse, select, font, undo, redo, format, compare, typing, writing	**Vocabulary:** ScratchJr, Bee-Bot, command, sprite, compare, programming, programming area, block, joining, command, **Start** block, run, program, background, delete, reset, algorithm, predict, effect, change, value, instructions, sprite, delete, appropriate
	Prior Learning: No previous links	**Prior Learning:** Y1 Technology around us	**Prior Learning:** No previous links	**Prior Learning:** No previous links	**Prior Learning:** Y1 Technology around us	**Prior Learning:** Y1 Moving a robot
Year 2	**Computer systems and networks – IT around us** 1. To recognise the uses and features of information technology 2. To identify the uses of information technology in the school 3. To identify information technology beyond school 4. To explain how information technology helps us 5. To explain how to use information technology safely 6. To recognise that choices are made when using information technology	**Creating media – Digital Photography** 1. To use a digital device to take a photograph 2. To make choices when taking a photograph 3. To describe what makes a good photograph 4. To decide how photographs can be improved 5. To use tools to change an image 6. To recognise that photos can be changed	**Programming A – Robot algorithms** 1. To describe a series of instructions as a sequence 2. To explain what happens if we change the order of instructions 3. To use logical reasoning to predict the outcome of a program 4. To explain that programming projects can have code and artwork 5. To design an algorithm 6. To create and debug a program that I have written	**Data and Information - Pictograms** 1. To recognise that we can count and compare objects using tally charts 2. To recognise that objects can be represented as pictures 3. To create a pictogram 4. To select objects by attribute and make comparisons 5. To recognise that people can be described by attributes 6. To explain that we can present information using a computer	**Creating media – Digital Music** 1. To say how music can make us feel 2. To identify that there are patterns in music 3. To experiment with sound using a computer 4. To use a computer to create a musical pattern 5. To create music for a purpose 6. To review and refine our computer work	**Programming B – programming quizzes** 1. To explain that a sequence of commands has a start 2. To explain that a sequence of commands has an outcome 3. To create a program using a given design 4. To change a given design 5. To create a program using my own design 6. To decide how my project can be improved
	Vocabulary: information technology (IT), computer, barcode, scanner/scan	**Vocabulary:** device, camera, photograph, capture, image, digital, landscape, portrait, framing, subject, compose, light sources, flash, focus, background, editing, filter, format, framing, lighting	**Vocabulary:** instruction, sequence, clear, unambiguous, algorithm, program, order, prediction, artwork, design, route, mat, debugging, decomposition	Vocabulary: More than, less than, most, least, organise, data, object, tally chart, votes, total, Pictogram, enter, compare, explain, more, less, most common, least common, attribute, group, same, different, conclusion, block diagram, sharing	**Vocabulary:** planets, Mars, Venus, war, peace, quiet, loud, feelings, emotions, pattern, rhythm, pulse, Neptune, pitch, tempo, notes, pattern, instrument, create, emotion, pulse/beat, open, edit	**Vocabulary:** Sequence, command, program, run, start, outcome, predict, program, blocks, Sprite, algorithm, blocks, design, predict, Actions, sprite, project, modify, change
	Prior Learning: Y1 Technology around us	**Prior Learning:** No previous links	**Prior Learning:** Y1 Moving a robot	**Prior Learning:** Y1 Grouping Data	**Prior Learning:** No previous links	**Prior Learning:** Y2 Robot algorithms
Year 3	**Computing systems and networks – Connecting computers** 1. To explain how digital devices function 2. To identify input and output devices 3. To recognise how digital devices can change the way we work 4. To explain how a computer network can be used to share information 5. To explore how digital devices can be connected **6.** To recognise the physical components of a network	**Creating media – Stop-frame animation** 1. To explain that animation is a sequence of drawings or photographs 2. To relate animated movement with a sequence of images 3. To plan an animation 4. To identify the need to work consistently and carefully 5. To review and improve an animation 6. To evaluate the impact of adding other media to an animation	**Programming A – Sequencing Sounds** 1. To explore a new programming environment 2. To identify that commands have an outcome 3. To explain that a program has a start 4. To recognise that a sequence of commands can have an order 5. To change the appearance of my project 6. To create a project from a task description	**Data and Information – Branching Databases** 1. To create questions with yes/no answers 2. To identify the attributes needed to collect data about an object 3. To create a branching database 4. To explain why it is helpful for a database to be well structured 5. To plan the structure of a branching database **6.** To independently create an identification tool	**Creating media – Desktop Publishing** 1. To recognise how text and images convey information 2. To recognise that text and layout can be edited 3. To choose appropriate page settings 4. To add content to a desktop publishing publication 5. To consider how different layouts can suit different purposes 6. To consider the benefits of desktop publishing	**Programming B – Events and Actions** 1. To explain how a sprite moves in an existing project 2. To create a program to move a sprite in four directions 3. To adapt a program to a new context 4. To develop my program by adding features 5. To identify and fix bugs in a program 6. To design and create a maze-based challenge
	Vocabulary: digital device, input, process, output, program, digital, non-digital, connection, network, switch, server, wireless access point, cables, sockets	**Vocabulary:** animation, flip book, stop- frame, frame, sequence, image, photograph, setting, character, events, onion skinning, consistency, evaluation, delete, media, import, transition	**Vocabulary:** Scratch, programming, blocks, commands, code, sprite, costume, stage, backdrop, motion, turn, point in direction, go to, glide, sequence, event, task, design, run the code, order, note, chord, algorithm, bug, debug, code	**Vocabulary:** Attribute, value, questions, table, Branching database, database, questions, objects, equal, even, separate, structure, compare, organise, select, decision tree	**Vocabulary:** text, images, advantages, disadvantages, communicate, font, style, landscape, portrait, orientation, placeholder, template, layout, content, desktop publishing, copy, paste, purpose, benefits	**Vocabulary:** motion, event, sprite, algorithm, logic, move, resize, extension block, pen up, set up, pen, design, action, debugging, errors, setup, code, test, debug, actions
	Prior Learning: Y2 IT around us	**Prior Learning:** Y2 Digital Photography	**Prior Learning:** Y1 and Y2 Programming Units	**Prior Learning:** Y2 Pictograms	**Prior Learning:** Y1 Digital Writing	**Prior Learning:** Y3 Sequencing Sounds

Year 4	**Computing systems and networks – The Internet** 1. To describe how networks physically connect to other networks 2. To recognise how networked devices make up the internet 3. To outline how websites can be shared via the World Wide Web (WWW) 4. To describe how content can be added and accessed on the World Wide Web (WWW) 5. To recognise how the content of the WWW is created by people 6. To evaluate the consequences of unreliable content	**Creating media – Audio Production** 1. To identify that sound can be recorded 2. To explain that audio recordings can be edited 3. To recognise the different parts of creating a podcast project 4. To apply audio editing skills independently 5. To combine audio to enhance my podcast project 6. To evaluate the effective use of audio	**Programming A – Repetition in Shapes** 1. To identify that accuracy in programming is important 2. To create a program in a text-based language 3. To explain what 'repeat' means 4. To modify a count-controlled loop to produce a given outcome 5. To decompose a task into small steps 6. To create a program that uses count-controlled loops to produce a given outcome	**Data and Information – Data Logging** 1. To explain that data gathered over time can be used to answer questions 2. To use a digital device to collect data automatically 3. To explain that a data logger collects 'data points' from sensors over time 4. To recognise how a computer can help us analyse data 5. To identify the data needed to answer questions 6. To use data from sensors to answer questions	**Creating media – Photo Editing** 1. To explain that the composition of digital images can be changed 2. To explain that colours can be changed in digital images 3. To explain how cloning can be used in photo editing 4. To explain that images can be combined 5. To combine images for a purpose 6. To evaluate how changes can improve an image	**Programming B – Repetition in Games** 1. To develop the use of count-controlled loops in a different programming environment 2. To explain that in programming there are infinite loops and count controlled loops 3. To develop a design that includes two or more loops which run at the same time 4. To modify an infinite loop in a given program 5. To design a project that includes repetition 6. To create a project that includes repetition
	Vocabulary: internet, network, router, security, switch, server, wireless access point (WAP), website, web page, web address, routing, web browser, World Wide Web, content, links, files, use, download, sharing, ownership, permission, information, accurate, honest, content, adverts	**Vocabulary:** audio, microphone, speaker, headphones, input device, output device, sound, podcast, edit, trim, align, layer, import, record, playback, selection, load, save, export, MP3, evaluate, feedback	**Vocabulary:** Logo (programming environment), program, turtle, commands, code snippet, algorithm, design, debug, pattern, repeat, repetition, count-controlled loop, value, trace, decompose, procedure	**Vocabulary:** data, table, layout, input device, sensor, data logger, data point, interval, analyse, data set, import, export, logged, collection, analyse, review, conclusion	**Vocabulary:** image, edit, digital, crop, rotate, undo, save, adjustments, effects, colours, hue, saturation, sepia, vignette, image, retouch, clone, select, combine, made up, real, composite, cut, copy, paste, alter, background, foreground, zoom, undo, font	**Vocabulary:** Scratch, programming, sprite, blocks, code, loop, repeat, value, infinite loop, count-controlled loop, costume, repetition, forever, animate, event block, duplicate, modify, design, algorithm, debug, refine, evaluate
	Prior Learning: Y3 Connecting computers	**Prior Learning:** No previous links	**Prior Learning:** Y3 Sequencing Sounds and Y3 Events and Actions	**Prior Learning:** Y3 Branching Databases	**Prior Learning:** Y2 Digital Photography	**Prior Learning:** Y4 Repetition in Shapes
Year 5	**Computing systems and networks – Systems and Searching** 1. To explain that computers can be connected together to form systems 2. To recognise the role of computer systems in our lives 3. To experiment with search engines 4. To describe how search engines select results 5. To explain ho search results are ranked 6. To recognise why the order of results is important, and to whom	**Creating media – Video Production** 1. To explain what makes a video effective 2. To identify digital devices that can record video 3. To capture video using a range of techniques 4. To create a storyboard 5. To identify that video can be improved through reshooting and editing 6. To consider the impact of the choices made when making and sharing a video	**Programming A – Selection in physical computing** 1. To control a simple circuit connected to a computer 2. To write a program that includes count-controlled loops 3. To explain that a loop can stop when a condition is met 4. To explain that a loop can be used to repeatedly check whether a condition has been met 5. To design a physical project that includes selection **6.** To create a program that controls a physical computing project	**Data and Information – Flat-file databases** 1. To use a form to record information 2. To compare paper and computer-based databases 3. To outline how you can answer questions by grouping and then sorting data 4. To explain that tools can be used to select specific data 5. To explain that computer programs can be used to compare data visually 6. To use a real-world database to answer questions	**Creating media – Introduction to Vector Graphics** 1. To identify that drawing tools can be used to produce different outcomes 2. To create a vector drawing by combining shapes 3. To use tools to achieve a desired effect 4. To recognise that vector drawings consist of layers 5. To group objects to make them easier to work with 6. To apply what I have learned about vector drawings	**Programming B – Making Quizzes** 1. To explain how selection is used in computer programs 2. To relate that a conditional statement connects a condition to an outcome 3. To explain how selection directs the flow of a program 4. To design a program which uses selection 5. To create a program which uses selection 6. To evaluate my program
	Vocabulary: system, connection, digital, input, process, storage, output, search, search engine, refine, index, bot, ordering, links, algorithm, search engine optimisation (SEO), web crawler, content creator, selection, ranking	**Vocabulary:** video, audio, camera, talking head, panning, close up, video camera, microphone, lens, mid-range, long shot, moving subject, side by side, angle (high, low, normal), static, zoom, pan, tilt, storyboard, filming, review, import, split, trim, clip, edit, reshoot, delete, reorder, export, evaluate, share	**Vocabulary:** microcontroller, USB, components, connection, infinite loop, output component, motor, repetition, count-controlled loop, Crumble controller, switch, LED, Sparkle, crocodile clips, connect, battery box, program, condition, Input, output, selection, action, debug, circuit, power, cell, buzzer	**Vocabulary:** Database, data, information, record, field, sort, order, group, search, criteria, chart, axis, compare, filter, presentation	**Vocabulary:** vector, drawing tools, object, toolbar, vector drawing, move, resize, colour, rotate, duplicate/copy, zoom, select, align, modify, layers, order, copy, paste, group, ungroup, reuse, reflection	**Vocabulary:** Selection, condition, true, false, count-controlled loop, outcomes, conditional statement, algorithm, program, debug, question, answer, task, design, input, implement, test, run, setup, operator
	Prior Learning: Y4 – The Internet	**Prior Learning:** Y3 Stop-frame animation and Y4 Audio production	**Prior Learning:** Y4 Repetition in Games	**Prior Learning:** Y4 Data Logging	**Prior Learning:** Y3 Desktop Publishing	**Prior Learning:** Y5 Selection in physical computing
Year 6	**Creating media – 3D modelling** 1. To recognise that you can work in three dimensions on a computer 2. To identify that digital 3D objects can be modified 3. To recognise that objects can be combined in a 3D model 4. To create a 3D model for a given purpose 5. To plan my own 3D model 6. To create my own digital 3D model	**Computing systems and networks – Communication and Collaboration** 1. To explain the importance of internet addresses 2. To recognise how data is transferred across the internet. 3. To explain how sharing information online can help people to work together 4. To evaluate different ways of working together online 5. To recognise how we communicate using technology 6. To evaluate different methods of online communication	**Creating media – web page creation** 1. To review an existing website and consider its structure 2. To plan the features of a web page 3. To consider the ownership and use of images (copyright) 4. To recognise the need to preview pages 5. To outline the need for a navigation path 6. To recognise the implications of linking to content owned by other people	**Programming A – Variables in games** 1. To define a 'variable' as something that is changeable 2. To explain why a variable is used in a program 3. To choose how to improve a game by using variables 4. To design a project that builds on a given example 5. To use my design to create a project 1. To evaluate my project	**Data and Information – Introduction to spreadsheets** 2. To create a data set in a spreadsheet 3. To build a data set in a spreadsheet 4. To explain that formulas can be used to produce calculated data 5. To apply formulas to data 6. To create a spreadsheet to plan an event 1. To choose suitable ways to present data	**Programming B – Sensing Movement** 2. To create a program to run on a controllable device 3. To explain that selection can control the flow of a program 4. To update a variable with a user input 5. To use a conditional statement to compare a variable to a value 6. To design a project that uses inputs and outputs on a controllable device 7. To develop a program to use inputs and outputs on a controllable device
	Vocabulary: TinkerCAD, 2D, 3D, shapes, select, move, perspective, view, handles, resize, lift, lower, recolour, rotate, duplicate, group, cylinder, cube, cuboid, sphere, cone, prism, pyramid, placeholder, hollow, choose, combine, construct, evaluate, modify	**Vocabulary:** communication, protocol, data, address, Internet Protocol (IP), Domain Name Server (DNS), packet, header, data payload, chat, explore, slide deck, reuse, remix, collaboration, internet, public, private, one- way, two-way, one-to-one, one-to-many	**Vocabulary:** website, web page, browser, media, Hypertext Markup Language (HTML), logo, layout, header, media, purpose, copyright, fair use, home page, preview, evaluate, device, Google Sites, breadcrumb trail, navigation, hyperlink, subpage, evaluate, implication, external link, embed	**Vocabulary:** variable, change, name, value, set, design, event, algorithm, code, task, artwork, program, project, code, test, debug, improve, evaluate, share, assign, declare	**Vocabulary:** Data, collecting, table, structure, spreadsheet, cell, cell reference, data item, format, formula, calculation, spreadsheet, input, output, range, duplicate, sigma, propose, question, Chart, evaluate, results, comparison, software, tool	**Vocabulary:** Micro:bit, MakeCode, input, process, output, flashing, USB, trace, selection, condition, if then else, variable, random, sensing, accelerometer, value, compass, direction, navigation, design, task, algorithm, step counter, plan, create, code, test, debug
	Prior Learning: Y5 Vector Graphics	**Prior Learning:** Y5 Systems and Searching	**Prior Learning:** Y3 Desktop Publishing	**Prior Learning:** Y5 Selection in physical computing and Making quizzes	**Prior Learning:** Y5 Flat-file databases	**Prior Learning:** Y3-5 Programming Units