

North Lancing Primary School – Knowledge Progression in Computing (Reception)



| Reception | Topic: | Prior Knowledge: | Key New Knowledge: | Key Vocabulary: | Working Digitally: |
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| Autumn 1 | Computing systems and networks – Technological toys | Children will likely have experienced basic technology at pre-school settings and home. | To identify toys that use technology. To understand that electricity is often needed to run them through batteries or plugs. | Interactive Whiteboard (IWB), computer, laptop, trains, batteries, charger, lead, socket, plug, | To experiment with new technology. To problem solve how things work. |
| Autumn 2 | Creating media – creating art | Learners will have had access to IWB during previous topic and will be aware of its use. | To know that symbols convey simple meaning. To evaluate choice of tools when creating. To understand simple inputs to devices (IWB). | Interactive Whiteboard (IWB), computer, laptop, touch, tap, press, gentle, screen, control, buttons, | To explore the use of different digital tools. |
| Spring 1 | Programming A – Commands | Learners will have had a term of instructions with language of instruction following being very apparent. | To understand that anyone can give and follow instructions. To identify instructions/commands in different forms. To follow location-based commands. To sort orders from suggestions. | Control, command, instruction, follow, forward, backward, turn, jump, touch, | To put together instructions into a simple sequence. |
| Spring 2 | Creating media – Technology for purpose | Learners will be aware of technology used for photographs and may have had opportunities to experiment. | To understand that some technology is for enjoyment and some has purpose. To know what a camera is and their purpose – taking photographs. | Camera, iPad, app, click, photo, photograph, purpose, fun, | To use a camera/tablet app to take photographs. To delete unwanted photographs. |
| Summer 1 | Computing systems and networks – Keyboard and mouse | Children will be aware of the classroom technology available and may have used the shared technology during the year. | To understand that touch-screens are one input device for a computer. To identify the outcome when a mouse or keyboard is used. | Mouse, keyboard, screen, monitor, computer, wire, button, click, drag, | To experiment with using a mouse and keyboard. |
| Summer 2 | Programming B – Simple sequences | Learners will have had time learning about the use of commands in Programming A and relating them to instructions. | To understand that technology can also be given commands. To know that when a button is pressed a command has been issued. | Click, button, command, instruction, forward, back, turn, left, right, Bee-bot, robot, computer, switch, on, off, go, clear, | To give commands to a floor robot. To experiment with putting commands together into simple sequences. |

North Lancing Primary School – Knowledge Progression in Computing (Year 1)



| Year 1 | Topic: | Prior Knowledge: | Key New Knowledge: | Key Vocabulary: | Working Digitally: |
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| Autumn 1 | Computing systems and networks – Technology around us | This unit progresses students' knowledge and understanding of technology and how they interact with it in school. | To identify technology, explain what it is and locate examples in the classroom. To name the main parts of a computer. To understand the use of a mouse and keyboard. To know how to use technology responsibly. | Technology, computer, mouse, trackpad, keyboard, screen, double-click, typing, | To switch on a computer, log in and use a mouse to click and drag. To open a program. To type on a keyboard. To edit text. |
| Autumn 2 | Creating media – digital painting | Learners will know how to switch their device on, enter usernames and passwords and will be able to use the mouse and keyboard. | To understand that there are different tools on a computer. To explain what different tools do and which tools are helpful and why. To compare painting a picture on a computer and paper. | Paint program, tool, paintbrush, erase, fill, undo, Piet Mondrian, primary colours, shape tools, line tool, fill tool, undo tool, Henri Matisse, Wassily Kandinsky, tools, feelings, brush style, Georges Seurat, pointillism, brush size, painting, computers, like, prefer, dislike | To mark make on a screen using different tools. To make careful choices when painting a digital picture. To adapt tool use to suit need. |
| Spring 1 | Programming A – Moving a robot | This unit progresses learners' knowledge and understanding of giving and following instructions. It moves from giving instructions to each other to giving instructions to a robot by programming it. | To explain what commands are and attribute it to actions. To understand the four directions and how they relate to the real world. To know that commands can be put together into a sequence to achieve a desired effect. To know there are several solutions to solve a problem. | Forwards, backwards, turn, clear, go, commands, instructions, directions, left, right, plan, algorithm, program, route | To match a command to an outcome. To combine commands to make a sequence. To predict the outcome of a sequence. To plan and begin to debug a simple program. |
| Spring 2 | Creating media – Digital writing | This unit progresses the learners' knowledge of using computers to create and manipulate digital content, focussing on using a word processor. The learners will develop their ability to find and use the keys on a keyboard in order to create digital content. | To know the functionality of different keys (space, letter, number, backspace). To identify that the look of text can be changed on a computer. To explain why tools are chosen to use. To compare typing on a computer to writing on paper. | Compare, typing, writing, numbers, space, backspace, text cursor, mouse, select, font, undo, redo, font, format, compare, typing, the same, writing | To use a computer to write, adding and removing text. To make careful choices when changing text. |
| Summer 1 | Data and information – Grouping data | This unit will introduce learners to data and information. It will introduce learners to the concept of labelling and grouping objects based on their properties. | To know that objects can be labelled and grouped in different ways. To know that when objects are grouped and sorted, answering questions is simpler. | Object, label, group, search, image, property, colour, size, shape, data set, more, less, most, fewest, | To label objects with a description and identify a label for a group of objects. To count objects with the same properties. |
| Summer 2 | Programming B – Programming animations | This unit progresses learners' knowledge and understanding of programming and follows on from 'Programming A – Moving a robot', where children will have learned to program a floor robot using instructions. | To compare different programming tools. To know that a series of commands can be joined together. To identify the effect of a changing value. To explain that each sprite has its own instructions. | ScratchJr, bee-bot, command, sprite, compare, programming, programming area, block, joining, start block, run, program, background, delete, reset, algorithm, predict, effect, change, value, instructions, sprite, appropriate, | To choose a command for a given purpose. To use command blocks to build and run a program. To change the value of commands. To design and create a program. |

North Lancing Primary School – Knowledge Progression in Computing (Year 2)



| Year 2 | Topic: | Prior Knowledge: | Key New Knowledge: | Key Vocabulary: | Working Digitally: |
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| Autumn 1 | Computing systems and networks – IT around us | This unit progresses learners' understanding of technology and how they interact with it. This unit also builds on the learners' understanding of using technology safely and responsibly. | To recognise the uses and features of information technology. To recognise IT and sort it by use, both in school and beyond. To explain how information technology helps us. To explain how to use information technology safely. To recognise that choices are made when using information technology. | Information technology, computer, barcode, scanner/scan | To identify examples of computers and parts of it. To demonstrate how IT devices work together. To recognise some rules for keeping safe. |
| Autumn 2 | Creating media – Digital photography | This unit builds on learners' prior work with digital drawing and begins the learners' understanding of how photos are captured and can be manipulated for different purposes. | To know which devices take photographs and explain how to capture a digital photo. To understand how composition, lighting and framing alters the perception of a photograph. To describe what makes a good photograph. To recognise that photos can be changed and edited. | Device, camera, photograph, capture, image, digital, landscape, portrait, framing, subject, compose, light sources, flash, focus, background, editing, filter, | To use a digital device to take a photograph. To make informed choices when taking a good photograph. To use tools to change an image. |
| Spring 1 | Data and information - Pictograms | This unit progresses students' knowledge and understanding of grouping data. It builds on the Year 1 Data and Information unit where learners labelled objects and grouped them based on different properties. | To recognise that we can count and compare objects using tally charts. To recognise that objects can be represented as pictures. To understand attributes of objects and people and that they can be compared, grouped and sorted by their attributes. To explain that we can present information using a computer. | More than, less than, most, least, organise, data, object, tally chart, votes, total, pictogram, enter, compare, count, explain, more common, less common, attribute, group, same, different, most popular, least popular, conclusion, block diagram | To record, represent and compare data in tally charts. To enter data and compare different formats for viewing. To create a pictogram. To use a computer program to present information in different ways. |
| Spring 2 | Programming A – Robot algorithms | Learners have had some experience of creating short programs using floor robots and predicting the outcome of a simple program. This unit progresses learners' knowledge of algorithms and how they are implemented as programs. | To describe a series of instructions as a sequence. To explain what happens when we change the order of instructions. To explain that programming projects can have code and artwork. To understand how programs can be designed, created and debugged. | Instruction, sequence, clear, unambiguous, algorithm, program, sequence, order, algorithm, instructions, prediction, artwork, design, route, mat, debugging, decomposition | To give and follow clear, simple instructions. To use an algorithm to program a sequence. To use logical reasoning to predict the outcome of a program. To design an algorithm. To create and debug a program. |
| Summer 1 | Creating media – Digital music | Learners should have experience of making choices on a tablet/computer, and they should be able to navigate within an application. Learners should also have some experience of patterns. | To say how music can make us feel, identifying differences, describing and comparing music. To explain that music is created and played by humans. To explain how music can be played in different ways, including digitally. To explain how work can be reviewed, refined and changed. | Music, planets, Mars, Venus, war, peace, quiet, loud, feelings, emotions, pattern, rhythm, pulse, Neptune, tempo, notes, instrument, create, open, edit, | To experiment with sound using a computer. To experiment with pitch. To use a computer to create a musical pattern. To create musical digitally for a purpose. To review and refine computer work. |
| Summer 2 | Programming B – Programming quizzes | Learners should have experience of making choices on a tablet/computer, and they should be able to navigate within an application. Learners should also have some experience of patterns. | To explain that a sequence of commands has a start and an outcome and to identify them. To work out the actions of an algorithm. To know how programs are built from algorithms. | Sequence, command, program, run, start, outcome, predict, blocks, sprite, algorithm, blocks, design, actions, project, modify, change, match, compare, debug, features, evaluate, | To predict the outcome of a sequence. To create a program using a given design or own design. |

North Lancing Primary School – Knowledge Progression in Computing (Year 3)



| Year 3 | Topic: | Prior Knowledge: | Key New Knowledge: | Key Vocabulary: | Working Digitally: |
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| Autumn 1 | Computing systems and networks – Connecting computers | This unit progresses learners' knowledge and understanding of technology by focusing on digital and non-digital devices, and introducing the concept of computers connected together as a network. | To identify and explain how digital devices function, including inputs, outputs and processes. To explain how digital devices can be used for different activities comparatively to non-digital tools. To explain how a computer network can be used to share information. To explore how digital devices can be connected. To recognise the physical components of a network. | Digital device, input, process, output, program, non-digital, connection, network, network switch, server, wireless access point, network cables, network socket, | To use devices, identifying the inputs, outputs and purpose. |
| Autumn 2 | Creating media – stop-frame animation | This unit progresses students' knowledge and understanding of using digital devices to create media, exploring how they can create stop-frame animations. | To explain that animation is a sequence of drawings or photographs. To relate movement with a sequence of images. To describe an animation that is achievable on screen and how it is created. To add other media to an animation. | Animation, flipbook, stop-frame, sequence, image, photograph, setting, character, events, onion skinning, consistency, delete, media, import, transition | To predict what an animation will look like. To create a stop-frame animation. To use onion skinning to make small changes between frames. To evaluate and improve an animation. |
| Spring 1 | Programming A – Sequencing sounds | This unit assumes that learners will have some prior experience of programming; the KS1 NCCE units cover floor robots and ScratchJr. | To identify that commands have an outcome. To explain that a program has a start and this can come in multiple formats. To recognise that a sequence of commands can have an order. | Scratch, programming, blocks, commands, code, sprite, costume, stage, backdrop, motion, turn, point in direction, go to, glide, sequence, event, task, design, code, run the code, note, chord, bug, debug, algorithm, | To explore a new programming environment, identifying objects and commands. To combine sound commands. To change the appearance of an object and build a sequence of commands. To implement an algorithm as code. |
| Spring 2 | Creating media – Desktop publishing | This unit progresses learners' knowledge of using digital devices to combine text and images building on work from the following units; Digital Writing Year 1, Digital painting Year 1, and Digital Photography Year 2. | To recognise how text and images convey information and identify the advantages and disadvantages of using both. To recognise placeholders and explain why they are important. To consider how different layouts can suit different purposes. To consider the benefits of desktop publishing and say why it might be helpful. | Text, images, advantages, disadvantages, communicate, font, font style, communicate, template, landscape, portrait, orientation, placeholder, template, layout, content, desktop publishing, copy, paste, purpose, benefits, | To change font style, size and colours for a given purpose. To edit text. To choose appropriate page settings. To add content to a desktop publishing publication. |
| Summer 1 | Data and information – Branching databases | This unit progresses learners' knowledge and understanding of the categories of data handling, with a particular focus on implementation. It builds on their knowledge of data and information from key stage 1. | To identify attributes and separate groups of objects by them. To understand a tree structure. To explain why it is helpful for a database to be well structured. To suggest real-world uses for branching databases. | Attribute, value, questions, table, objects, branching database, database, equal, even, separate, order, organise, structure, selecting, information, decision tree | To create questions with yes/no answers. To plan the structure of and create a branching database. To independently create an identification tool. |
| Summer 2 | Programming B - Events and actions in programs | This unit assumes that learners will have some prior experience of programming. The key stage 1 National Centre for Computing Education units focus on floor robots and ScratchJr. | To explain the relationship between an event and an action. To consider the real world when making programming design choices. To understand how code matches outcomes. | Motion, event, sprite, algorithm, logic, move, resize, extension block, pen up, set up, design, event, action, algorithm, debugging, errors, setup, design, code, test, debug, | To choose which keys to use for actions. To program movement. To adapt a program to a new context. To develop a program by adding features. To build more sequences of commands to make a design work. To identify and fix bugs in a program. |

North Lancing Primary School – Knowledge Progression in Computing (Year 4)



| Year 4 | Topic: | Prior Knowledge: | Key New Knowledge: | Key Vocabulary: | Working Digitally: |
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| Autumn 1 | Computing systems and networks – The Internet | This unit progresses students' knowledge and understanding of networks in Year 3. | To describe the internet as a network of networks, demonstrate how information is shared and discuss why it needs protecting. To explain that the World Wide Web contains websites that provides many services. To explain types of media, where it is stored and how to access it. To understand content, ownership and protection. To consider honesty, accuracy and legality of information on the internet. | Internet, network, router, network security, switch, wireless access point (WAP), website, web page, web address, routing, web browser, World Wide Web, content, links, files, use, content, download, sharing, ownership, permission, sharing, accurate, honest, | To explore the World Wide Web safely, securely and responsibly. |
| Autumn 2 | Creating media – Audio production | This unit progresses students' knowledge and understanding of what media is and creating media, by focusing on the recording and editing of sound to produce a podcast. | To explain permissions and ownership of content. To understand how a soundwave represents sound. To explain how sounds can be combined to increase engagement. To explain the difference between saving and exporting a project. To know what qualifies a strength in an audio recording in order to evaluate others. | Audio, microphone, speaker, headphones, input device, output device, sound, podcast, edit, trim, align, layer, import, playback, edit, selection, load, import, save, export, MP3, evaluate, feedback | To identify input and output devices used to record and play sound. To record and re-record voice using a computer. To plan, record and evaluate a podcast recording. To review and improve on performance. |
| Spring 1 | Programming A – Repetition in Shapes | This unit progresses students' knowledge and understanding of programming. It progresses from the sequence of commands in a program to using count-controlled loops. | To explain the effect of changing a value of a command. To identify repetition in tasks in everyday life and in computer code. To know how a count-controlled loop produces a given outcome. To predict the outcome of a program. To recognise and explain what a procedure is and why they are effective. | Program, turtle, commands, code snippet, algorithm, design, debug, pattern, repeat, repetition, count-controlled loop, algorithm, value, trace, decompose, procedure, debug | To program a computer by typing commands. To create code for a specific purpose. To write, test and code algorithms. To alter and adapt values to change loops. To design, use and develop a program. |
| Spring 2 | Data and information – Data logging | This unit progresses learners' knowledge and understanding of data. Specifically, it builds on the concept of answering questions with data which is first introduced in the KS1 data and information units. | To explain that data gathered over time can be used to answer questions. To identify data gathered over time and suggest questions about it. To explain what data can be collected using sensors. To relate data loggers to collection time intervals. To recognise how a computer can help us analyse data. To explain benefits of using a data logger. | Data, table, layout, input device, sensor, data logger, logging, data point, interval, analyse, import, export, data set, collection, review, conclusion | To use a digital device to collect data automatically. To use data from a sensor to answer questions. To view, sort and organise data. To propose a question, plan, use and interpret data using a data logger. |
| Summer 1 | Creating media – Photo editing | This unit progresses students' knowledge and understanding of digital photography and using digital devices to create media. | To explain that composition of digital images can be changed. To explain why images may be edited via cropping, rotation, filter or cloning. To explain different colour effects in digital images. To explain how cloning can be used in photo editing. | Image, edit, digital, crop, rotate, undo, save, adjustments, effects, colour, hue, saturation, sepia, vignette, edit, retouch, clone, select, copy, paste, combine, made up, real, composite, background, foreground, crop, zoom, undo, font, rotate, | To crop, rotate, filter, clone and edit digital images. To experiment with tools to select, copy, cut and mix between multiple images. To combine images for a purpose. To review images against a criteria and use feedback to make changes. |
| Summer 2 | Programming B – Repetition in games | This unit assumes that learners will have some prior experience of programming. The KS1 NCCE units cover floor robots and ScratchJr, and Scratch is introduced in the Year 3 programming units. | To explain that in programming there are infinite loops and count-controlled loops. To identify which parts of a loop can be changed. To select key parts of a given project to adapt. | Scratch, programming, sprite, blocks, code, loop, repeat, value, forever, infinite, count-controlled loop, costume, event block, duplicate, modify, design, algorithm, debug, refine, evaluate, | To develop the use of count-controlled loops in a different programming environment. To develop a design that includes two or more loops which run at the same time. To design and create a project which includes repetition. |

North Lancing Primary School – Knowledge Progression in Computing (Year 5)



| Year 5 | Topic: | Prior Knowledge: | Key New Knowledge: | Key Vocabulary: | Working Digitally: |
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| Autumn 1 | Computing systems and networks - Systems and searching | This unit progresses learners' knowledge and understanding of computing systems. | To explain systems in relation to parts. To describe the input, process and output of a digital system. To identify tasks managed by computer systems and human elements. To explain the benefits of computer systems. To recognise the role of web crawlers in creating an index. To describe how a search engine ranks results. To describe how search results can be influenced, limited and profitable. | System, connection, digital, process, output, input, search, search engine, refine, index, crawler, bot, ordering, ranking, links, algorithm, search engine optimisation, content creator, selection | To use a web search to find specific information. To refine and compare results from web searches. To order a list by a rank. |
| Autumn 2 | Creating media – 3D modelling | This unit progresses students' knowledge and understanding of creating 3D graphics using a computer. Prior to undertaking this unit, learners will have worked with 2D graphics applications. | To recognise that you can work in three dimensions on a computer. To show that placeholders can create holes in 3D objects. To explain how a 3D model could be improved. | 2D, 3D, shapes, select, move, perspective, view, handles, resize, lift, lower, recolour, rotate, duplicate, group, cylinder, placeholder, hollow, choose, combine, construct, evaluate, modify, | To resize, lift/lower, recolour, rotate, duplicate, group, accurately size 3D objects. To analyse, choose, combine and construct a 3D model. |
| Spring 1 | Data and information – Flat-file databases | This unit progresses learners' knowledge and understanding of why and how information might be stored in a database, and looks at how tools within a database can help us to answer questions about our data. | To explain how information can be recorded. To explain what a field and record is in a database. To explain that data can be grouped using chosen values. To outline how 'AND' and 'OR' can be used to refine data selection. To select and explain different charts to visually compare data. | Database, data, information, record, field, sort, order, group, search, criteria, graph, chart, axis, compare, filter, presentation, | To order, sort and group data. To navigate a flat-file database. To group information in a database and combine grouping and sorting to answer questions. To choose fields/values to answer questions. To refine searches and ask appropriate questions. |
| Spring 2 | Programming A – Selection in physical computing | Learners will have prior experience of programming using a block-based language (eg Scratch) and understand the concepts of sequence and repetition. KS1 units focus on floor robots and ScratchJr,. | To explain what an infinite loop does. To explain that a condition is either true or false. To explain that a condition being met can start an action and identify these. To know real-world examples of conditions starting an action. To know how to create programs that control a physical computing project. | Microcontroller, components, connection, infinite loop, motor, repetition, count-controlled loop, crumble controller, switch, motor, LED, Sparkle, crocodile clips, connect, battery box, program, condition, input, output, selection, debug, | To create a simple circuit connected to a computer. To use and design sequences using count-controlled loops to control outputs. To design a conditional loop and program a microcontroller. To use selection to direct the flow of a program. |
| Summer 1 | Creating media – Introduction to vector graphics | This unit progresses learners' knowledge and understanding of digital painting and has some links to the Year 3 'Creating media – Desktop publishing' unit, in which learners used digital images. | To recognise vector drawings are made with shapes and discuss their difference from paper-based drawings. To explain that each element added to a vector drawing is an object. To explain how alignment grids and resize handles can be used to improve consistency. To compare vector drawings to freehand paint drawings. | Vector, drawing tools, object, toolbar, move, resize, colour, rotate, duplicate/copy, align, modify, layers, order, object, copy, paste, group, ungroup, reflection, | To identify and create shapes to make vector drawings. To move, resize and rotate duplicated objects. To use the zoom tool to add detail to drawings. To use layers in vector images. To group, ungroup and regroup objects. To create a vector image for a purpose. |
| Summer 2 | Programming B – Selection in quizzes | Learners will have prior experience of programming using block-based construction (e.g. Scratch), understand the concepts of 'sequence' and 'repetition', and have some experience of using 'selection'. | To recall how conditions are used in selection. To identify the condition and outcomes in an 'if... then... else...' statement. To explain that program flow can branch according to a condition. To show that a condition can direct program flow in one of two ways. | Selection, condition, true, false, count-controlled loop, conditional statement, algorithm, program, debug, question, answer, implement, design, test, run, outcomes, setup, | To identify and modify conditions in a program. To use selection when creating a program. To identify the outcome of user input in an algorithm. To test, share and identify improvements in a program. |

North Lancing Primary School – Knowledge Progression in Computing (Year 6)



| Year 6 | Topic: | Prior Knowledge: | Key New Knowledge: | Key Vocabulary: | Working Digitally: |
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| Autumn 1 | Computing systems and networks - Communication and collaboration | This unit progresses learners' knowledge and understanding of computing systems and online collaborative working. | To recognise that data is transferred using agreed methods. To explain that internet devices have addresses. To explain that data is transferred over networks in packets. To recognise how to access shared files stored online. To explain that the internet allows different media to be shared. To identify different ways of working together online, publicly and privately. To explain the different ways in which people communicate including over the internet. | Communication, protocol, data, address, Internet Protocol (IP) address, 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, | To identify and explain the main parts of a data packet. To send information over the internet in different ways. To compare different methods of communicating on the internet. |
| Autumn 2 | Creating media – Web page creation | This unit progresses students' knowledge and understanding of the following: digital writing, digital painting, desktop publishing, digital photography, photo editing, and vector drawing. | To know that websites are written in HTML. To describe what is meant by the term 'fair use'. To know why to use copyright-free images. To explain what a navigation path is and why it is useful. To know the implication of linking to content owned by others. | Website, web page, browser, media, Hypertext Markup Language (HTML), web page, website, logo, layout, header, media, purpose, copyright, fair use, home page, preview, evaluate, device, Google Sites, breadcrumb trail, navigation, hyperlink, subpage, embed, | To explore different media on websites. To recognise the common features of a web page and draw a layout for a purpose. To add content to, preview and evaluate a web page. To use hyperlinks. |
| Spring 1 | Programming A - Variables in games | Learners have some prior experience of programming in Scratch. Specifically, they should be familiar with the programming constructs of sequence, repetition, and selection. Each year group includes at least one unit that focuses on Scratch. | To identify a program variable as a placeholder in memory for a single value. To explain that a variable has a name and a value. To recognise that the value of a variable can be changed. To recognise that the value of a variable can be used by a program. | Variable, change, name, value, set, change, design, event, algorithm, code, task, artwork, program, project, test, debug, improve, evaluate, share | To decide where in a program to change a variable. To make use of an event in a program to set a variable. To create algorithms for my project. To choose a name that identifies the role of a variable. To test the code that they have written. |
| Spring 2 | Data and information - Spreadsheets | This unit progresses students' knowledge and understanding of data, and teaches them how to organise and modify data within spreadsheets building on experiences of data in the Y4 data logging and Y5 branching database units. | To explain what an item of data is. To explain which data types can be used in calculations. To construct formula in a spreadsheet. To identify that changing inputs changes outputs. To explain why data should be organised. To suggest when to use a table or chart. | Data, collecting, table, structure, spreadsheet, cell, cell reference, data item, format, formula, calculation, input, output, operation, range, duplicate, sigma, propose, question, data set, organised, chart, evaluate, comparison, results, software, tools, | To collect, structure and enter data into a spreadsheet. To choose and apply appropriate cell formats. To calculate data using different operations. To create and apply formula to multiple cells. To produce a chart that answers questions. |
| Summer 1 | Creating media – Video production | This unit builds on Year 4 unit 'Photo editing' where composition is introduced and the Year 3 unit 'Stop-frame animation' where learners explored some of the features of video production. | To explain that a video is a visual media format. To identify and find features on a digital video recording device. To suggest filming techniques for a given purpose. To explain how to improve a video by reshooting and editing. To know which tools can be used to make edits to a video. To recognise that choices when making a video impact the final outcome. | Video, audio, camera, talking head, panning, close up, video camera, microphone, lens, mid range, long shot, high, low, normal angle, moving subject, side by side, static, tilt, storyboard, filming, review, import, split, trim, clip, edit, reshoot, reorder, export, share, | To identify and compare features of videos. To experiment with different camera angles and use a microphone. To capture video, save it and review its effectiveness. To outline scenes of a video. To make edits to a video and evaluate the final outcome. |
| Summer 2 | Programming B – Sensing movement | This unit builds upon the understanding of sequence, repetition and selection independently within programming. | To identify examples of conditions in the real world. To determine the flow of a program using selection. To use a variable in an if, then, else statement. To explain that checking a variable doesn't change its value. To use operands in if, then statements. To explain the importance of the order of conditions in else, if statements. To know a range of approaches to find and fix bugs. | Micro:bit, MakeCode, input, process, output, flashing, USB, trace, selection, condition, if then else, variable, random, accelerometer, value, sensing, compass, direction, navigation, step counter, plan, create, code, test, debug, | To apply knowledge of programming to a new environment. To test programs on an emulator and then transfer to a controllable device. To experiment with different physical inputs. To modify, create and test programs. |