Detailed overview of lessons – Years 1 to 6

| Year Group | Unit Name | Lesson sequence | Lesson Focus | End points | Vocabulary list |
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| 1 | Computing systems and networks – Technology around us | 1 | -To identify technology | -I can explain how these technology examples help us<br>- I can explain technology as something that helps us<br>- I can locate examples of technology in the classroom | technology, computer, mouse, trackpad, keyboard, screen, double-click, typing |
| 1 | Computing systems and networks – Technology around us | 2 | -To identify a computer and its main parts | -I can name the main parts of a computer<br>- I can switch on and log into a computer<br>- I can use a mouse to click and drag | |
| 1 | Computing systems and networks – Technology around us | 3 | -To use a mouse in different ways | -I can click and drag to make objects on a screen<br>- I can use a mouse to create a picture<br>- I can use a mouse to open a program | |
| 1 | Computing systems and networks – Technology around us | 4 | -To use a keyboard to type on a computer | -I can save my work to a file<br>- I can say what a keyboard is for<br>- I can type my name on a computer | |
| 1 | Computing systems and networks – Technology around us | 5 | -To use the keyboard to edit text | -I can delete letters<br>- I can open my work from a file<br>- I can use the arrow keys to move the cursor | |

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| 1 | Computing systems and networks – Technology around us | 6 | -To create rules for using technology responsibly | -I can discuss how we benefit from these rules<br>- I can give examples of some of these rules<br>- I can identify rules to keep us safe and healthy when we are using technology in and beyond the home | |
| 1 | Creating media – Digital painting | 1 | -To describe what different freehand tools do | -I can draw lines on a screen and explain which tools I used<br>- I can make marks on a screen and explain which tools I used<br>- I can use the paint tools to draw a picture | paint program, tool, paintbrush, erase, fill, undo, shape tools, line tool, fill tool, undo tool, colour, brush style, brush size, pictures, painting, computers |
| 1 | Creating media – Digital painting | 2 | -To use the shape tool and the line tools | -I can make marks with the square and line tools<br>- I can use the shape and line tools effectively<br>- I can use the shape and line tools to recreate the work of an artist | |
| 1 | Creating media – Digital painting | 3 | -To make careful choices when painting a digital picture | -I can choose appropriate shapes<br>- I can create a picture in the style of an artist<br>- I can make appropriate colour choices | |
| 1 | Creating media – Digital painting | 4 | -To explain why I chose the tools I used | -I can choose appropriate paint tools and colours to recreate the work of an artist<br>- I can say which tools were helpful and why<br>- I know that different paint tools do different jobs | |

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| 1 | Creating media – Digital painting | 5 | -To use a computer on my own to paint a picture | -I can change the colour and brush sizes<br>- I can make dots of colour on the page<br>- I can use dots of colour to create a picture in the style of an artist on my own | |
| 1 | Creating media – Digital painting | 6 | -To compare painting a picture on a computer and on paper | -I can explain that pictures can be made in lots of different ways<br>- I can say whether I prefer painting using a computer or using paper<br>- I can spot the differences between painting on a computer and on paper | |
| 1 | Programming A – Moving a robot | 1 | -To explain what a given command will do | -I can match a command to an outcome<br>- I can predict the outcome of a command on a device<br>- I can run a command on a device | Bee-Bot, forwards, backwards, turn, clear, go, commands, instructions, directions, left, right, route, plan, algorithm, program. |
| 1 | Programming A – Moving a robot | 2 | -To act out a given word | -I can follow an instruction<br>- I can give directions<br>- I can recall words that can be acted out | |
| 1 | Programming A – Moving a robot | 3 | -To combine forwards and backwards commands to make a sequence | -I can compare forwards and backwards movements<br>- I can predict the outcome of a sequence involving forwards and backwards commands<br>- I can start a sequence from the same place | |

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| 1 | Programming A – Moving a robot | 4 | -To combine four direction commands to make sequences | -I can compare left and right turns<br>- I can experiment with turn and move commands to move a robot<br>- I can predict the outcome of a sequence involving up to four commands | |
| 1 | Programming A – Moving a robot | 5 | -To plan a simple program | -I can choose the order of commands in a sequence<br>- I can debug my program<br>- I can explain what my program should do | |
| 1 | Programming A – Moving a robot | 6 | -To find more than one solution to a problem | -I can identify several possible solutions<br>- I can plan two programs<br>- I can use two different programs to get to the same place | |
| 1 | Data and information – Grouping data | 1 | -To label objects | -I can describe objects using labels<br>- I can identify the label for a group of objects<br>- I can match objects to groups | object, label, group, search, image, property, colour, size, shape, value, data set, more, less, most, fewest, least, the same |
| 1 | Data and information – Grouping data | 2 | -To identify that objects can be counted | -I can count a group of objects<br>- I can count objects<br>- I can group objects | |
| 1 | Data and information – Grouping data | 3 | -To describe objects in different ways | -I can describe an object<br>- I can describe a property of an object<br>- I can find objects with similar properties | |
| 1 | Data and information – Grouping data | 4 | -To count objects with the same properties | -I can count how many objects share a property<br>- I can group objects in more than one way<br>- I can group similar objects | |

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| 1 | Data and information – Grouping data | 5 | -To compare groups of objects | -I can choose how to group objects<br>- I can describe groups of objects<br>- I can record how many objects are in a group | |
| 1 | Data and information – Grouping data | 6 | -To answer questions about groups of objects | -I can compare groups of objects<br>- I can decide how to group objects to answer a question<br>- I can record and share what I have found | |
| 1 | Creating media – Digital writing | 1 | -To use a computer to write | -I can identify and find keys on a keyboard<br>- I can open a word processor<br>- I can recognise keys on a keyboard | 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. |
| 1 | Creating media – Digital writing | 2 | -To add and remove text on a computer | -I can enter text into a computer<br>- I can use backspace to remove text<br>- I can use letter, number, and space keys | |
| 1 | Creating media – Digital writing | 3 | -To identify that the look of text can be changed on a computer | -I can explain what the keys that I have learnt about already do<br>- I can identify the toolbar and use bold, italic, and underline<br>- I can type capital letters | |
| 1 | Creating media – Digital writing | 4 | -To make careful choices when changing text | -I can change the font<br>- I can select all of the text by clicking and dragging<br>- I can select a word by double-clicking | |
| 1 | Creating media – Digital writing | 5 | -To explain why I used the tools that I chose | -I can decide if my changes have improved my writing<br>- I can say what tool I used to change the text<br>- I can use ‘undo’ to remove changes | |

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| 1 | Creating media – Digital writing | 6 | -To compare typing on a computer to writing on paper | -I can explain the differences between typing and writing<br>- I can make changes to text on a computer<br>- I can say why I prefer typing or writing | |
| 1 | Programming B - Programming animations | 1 | -To choose a command for a given purpose | -I can compare different programming tools<br>- I can find which commands to move a sprite<br>- I can use commands to move a sprite | ScratchJr, command, sprite, compare, programming, area, block, joining, start, run, program, background, delete, reset, algorithm, predict, effect, change, value, instructions, design. |
| 1 | Programming B - Programming animations | 2 | -To show that a series of commands can be joined together | -I can run my program<br>- I can use a Start block in a program<br>- I can use more than one block by joining them together | |
| 1 | Programming B - Programming animations | 3 | -To identify the effect of changing a value | -I can change the value<br>- I can find blocks that have numbers<br>- I can say what happens when I change a value | |
| 1 | Programming B - Programming animations | 4 | -To explain that each sprite has its own instructions | -I can add blocks to each of my sprites<br>- I can delete a sprite<br>- I can show that a project can include more than one sprite | |
| 1 | Programming B - Programming animations | 5 | -To design the parts of a project | -I can choose appropriate artwork for my project<br>- I can create an algorithm for each sprite<br>- I can decide how each sprite will move | |

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| 1 | Programming B - Programming animations | 6 | -To use my algorithm to create a program | -I can add programming blocks based on my algorithm<br>- I can test the programs I have created<br>- I can use sprites that match my design | |
| 2 | Computing systems and networks – IT around us | 1 | -To recognise the uses and features of information technology | -I can describe some uses of computers<br>- I can identify examples of computers<br>- I can identify that a computer is a part of IT | Information technology (IT), computer, barcode, scanner/scan |
| 2 | Computing systems and networks – IT around us | 2 | -To identify the uses of information technology in the school | -I can identify examples of IT<br>- I can identify that some IT can be used in more than one way<br>- I can sort school IT by what it's used for | |
| 2 | Computing systems and networks – IT around us | 3 | -To identify information technology beyond school | -I can find examples of information technology<br>- I can sort IT by where it is found<br>- I can talk about uses of information technology | |
| 2 | Computing systems and networks – IT around us | 4 | -To explain how information technology helps us | -I can demonstrate how IT devices work together<br>- I can recognise common types of technology<br>- I can say why we use IT | |
| 2 | Computing systems and networks – IT around us | 5 | -To explain how to use information technology safely | -I can list different uses of information technology<br>- I can say how rules can help keep me safe<br>- I can talk about different rules for using IT | |

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| 2 | Computing systems and networks – IT around us | 6 | -To recognise that choices are made when using information technology | -I can explain the need to use IT in different ways<br>- I can identify the choices that I make when using IT<br>- I can use IT for different types of activities | |
| 2 | Creating media – Digital photography | 1 | -To use a digital device to take a photograph | -I can explain what I did to capture a digital photo<br>- I can recognise what devices can be used to take photographs<br>- I can talk about how to take a photograph | device, camera, photograph, capture, image, digital, landscape, portrait, framing, subject, compose, light sources, flash, focus, background, editing, filter, format, framing, lighting, |
| 2 | Creating media – Digital photography | 2 | -To make choices when taking a photograph | -I can explain the process of taking a good photograph<br>- I can explain why a photo looks better in portrait or landscape format<br>- I can take photos in both landscape and portrait format | |
| 2 | Creating media – Digital photography | 3 | -To describe what makes a good photograph | -I can discuss how to take a good photograph<br>- I can identify what is wrong with a photograph<br>- I can improve a photograph by retaking it | |
| 2 | Creating media – Digital photography | 4 | -To decide how photographs can be improved | -I can experiment with different light sources<br>- I can explain why a picture may be unclear<br>- I can explore the effect that light has on a photo | |

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| 2 | Creating media – Digital photography | 5 | -To use tools to change an image | -I can explain my choices<br>- I can recognise that images can be changed<br>- I can use a tool to achieve a desired effect | |
| 2 | Creating media – Digital photography | 6 | -To recognise that photos can be changed | -I can apply a range of photography skills to capture a photo<br>- I can identify which photos are real and which have been changed<br>- I can recognise which photos have been changed | |
| 2 | Programming A – Robot algorithms | 1 | -To describe a series of instructions as a sequence | -I can choose a series of words that can be enacted as a sequence<br>- I can follow instructions given by someone else<br>- I can give clear instructions | instruction, sequence, clear, unambiguous, algorithm, program, order, prediction, artwork, design, route, mat, debugging, decomposition |
| 2 | Programming A – Robot algorithms | 2 | -To explain what happens when we change the order of instructions | -I can show the difference in outcomes between two sequences that consist of the same commands<br>- I can use an algorithm to program a sequence on a floor robot<br>- I can use the same instructions to create different algorithms | |
| 2 | Programming A – Robot algorithms | 3 | -To use logical reasoning to predict the outcome of a program | -I can compare my prediction to the program outcome<br>- I can follow a sequence<br>- I can predict the outcome of a sequence | |
| 2 | Programming A – Robot algorithms | 4 | -To explain that programming projects can have code and artwork | -I can explain the choices I made for my mat design<br>- I can identify different routes around my mat | |

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| | | | | - I can test my mat to make sure that it is usable | |
| 2 | Programming A – Robot algorithms | 5 | -To design an algorithm | -I can create an algorithm to meet my goal<br>- I can explain what my algorithm should achieve<br>- I can use my algorithm to create a program | |
| 2 | Programming A – Robot algorithms | 6 | -To create and debug a program that I have written | -I can plan algorithms for different parts of a task<br>- I can put together the different parts of my program<br>- I can test and debug each part of the program | |
| 2 | Data and information – Pictograms | 1 | -To recognise that we can count and compare objects using tally charts | -I can compare totals in a tally chart<br>- I can record data in a tally chart<br>- I can represent a tally count as a total | more than, less than, most, least, common, popular, organise, data, object, tally chart, votes, total, pictogram, enter, data, compare, objects, count, explain, attribute, group, same, different, conclusion, block diagram, sharing |
| 2 | Data and information – Pictograms | 2 | -To recognise that objects can be represented as pictures | -I can enter data onto a computer<br>- I can use a computer to view data in a different format<br>- I can use pictograms to answer simple questions about objects | |
| 2 | Data and information – Pictograms | 3 | -To create a pictogram | -I can explain what the pictogram shows<br>- I can organise data in a tally chart<br>- I can use a tally chart to create a pictogram | |

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| 2 | Data and information – Pictograms | 4 | -To select objects by attribute and make comparisons | -I can answer 'more than'/'less than' and 'most/least' questions about an attribute<br>- I can create a pictogram to arrange objects by an attribute<br>- I can tally objects using a common attribute | |
| 2 | Data and information – Pictograms | 5 | -To recognise that people can be described by attributes | -I can choose a suitable attribute to compare people<br>- I can collect the data I need<br>- I can create a pictogram and draw conclusions from it | |
| 2 | Data and information – Pictograms | 6 | -To explain that we can present information using a computer | -I can give simple examples of why information should not be shared<br>- I can share what I have found out using a computer<br>- I can use a computer program to present information in different ways | |
| 2 | Creating media - Digital music | 1 | -To say how music can make us feel | -I can describe music using adjectives<br>- I can identify simple differences in pieces of music<br>- I can say what I do and don't like about a piece of music | music, quiet, loud, feelings, emotions, pattern, rhythm, pulse, pitch, tempo, rhythm, notes, create, emotion, beat, instrument, open, edit. |
| 2 | Creating media - Digital music | 2 | -To identify that there are patterns in music | -I can create a rhythm pattern<br>- I can explain that music is created and played by humans<br>- I can play an instrument following a rhythm pattern | |
| 2 | Creating media - Digital music | 3 | -To experiment with sound using a computer | -I can connect images with sounds<br>- I can relate an idea to a piece of music | |

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| | | | | - I can use a computer to experiment with pitch | |
| 2 | Creating media - Digital music | 4 | -To use a computer to create a musical pattern | -I can explain how my music can be played in different ways<br>- I can identify that music is a sequence of notes<br>- I can refine my musical pattern on a computer | |
| 2 | Creating media - Digital music | 5 | -To create music for a purpose | -I can add a sequence of notes to my rhythm<br>- I can create a rhythm which represents an animal I've chosen<br>- I can create my animal's rhythm on a computer | |
| 2 | Creating media - Digital music | 6 | -To review and refine our computer work | -I can explain how I changed my work<br>- I can listen to music and describe how it makes me feel<br>- I can review my work | |
| 2 | Programming B - Programming quizzes | 1 | -To explain that a sequence of commands has a start | -I can identify that a program needs to be started<br>- I can identify the start of a sequence<br>- I can show how to run my program | sequence, command, program, run, start, outcome, predict, blocks, design, actions, sprite, project, modify, change, algorithm, build, match, compare, debug, |
| 2 | Programming B - Programming quizzes | 2 | -To explain that a sequence of commands has an outcome | -I can change the outcome of a sequence of commands<br>- I can match two sequences with the same outcome<br>- I can predict the outcome of a sequence of commands | |

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| 2 | Programming B - Programming quizzes | 3 | -To create a program using a given design | -I can build the sequences of blocks I need<br>- I can decide which blocks to use to meet the design<br>- I can work out the actions of a sprite in an algorithm | features, evaluate, decomposition, code. |
| 2 | Programming B - Programming quizzes | 4 | -To change a given design | -I can choose backgrounds for the design<br>- I can choose characters for the design<br>- I can create a program based on the new design | |
| 2 | Programming B - Programming quizzes | 5 | -To create a program using my own design | -I can build sequences of blocks to match my design<br>- I can choose the images for my own design<br>- I can create an algorithm | |
| 2 | Programming B - Programming quizzes | 6 | -To decide how my project can be improved | -I can compare my project to my design<br>- I can debug my program<br>- I can improve my project by adding features | |

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| 3 | Computing systems and networks – Connecting computers | 1 | -To explain how digital devices function | -I can explain that digital devices accept inputs<br>- I can explain that digital devices produce outputs<br>- I can follow a process | digital device, input, process, output, program,<br>digital, non-digital, |

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| 3 | Computing systems and networks – Connecting computers | 2 | -To identify input and output devices | -I can classify input and output devices<br>- I can describe a simple process<br>- I can design a digital device | connection, network, switch,<br>server, wireless access point, cables, sockets |
| 3 | Computing systems and networks – Connecting computers | 3 | -To recognise how digital devices can change the way we work | -I can explain how I use digital devices for different activities<br>- I can recognise similarities between using digital devices and non-digital tools<br>- I can suggest differences between using digital devices and non-digital tools | |
| 3 | Computing systems and networks – Connecting computers | 4 | -To explain how a computer network can be used to share information | -I can discuss why we need a network switch<br>- I can explain how messages are passed through multiple connections<br>- I can recognise different connections | |
| 3 | Computing systems and networks – Connecting computers | 5 | -To explore how digital devices can be connected | -I can demonstrate how information can be passed between devices<br>- I can explain the role of a switch, server, and wireless access point in a network<br>- I can recognise that a computer network is made up of a number of devices | |
| 3 | Computing systems and networks – Connecting computers | 6 | -To recognise the physical components of a network | -I can identify how devices in a network are connected together<br>- I can identify networked devices around me<br>- I can identify the benefits of computer networks | |

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| 3 | Creating media - Stop-frame animation | 2 | -To relate animated movement with a sequence of images | -I can create an effective stop-frame animation<br>- I can explain why little changes are needed for each frame<br>- I can predict what an animation will look like | animation, flip book, stop frame, frame, sequence, image, photograph, setting, character, events, onion skinning, consistency, evaluation, delete, media, import, transition. |
| 3 | Creating media - Stop-frame animation | 3 | -To plan an animation | -I can break down a story into settings, characters and events<br>- I can create a storyboard<br>- I can describe an animation that is achievable on screen | |
| 3 | Creating media - Stop-frame animation | 4 | -To identify the need to work consistently and carefully | -I can evaluate the quality of my animation<br>- I can review a sequence of frames to check my work<br>- I can use onion skinning to help me make small changes between frames | |
| 3 | Creating media - Stop-frame animation | 5 | -To review and improve an animation | -I can evaluate another learner's animation<br>- I can explain ways to make my animation better<br>- I can improve my animation based on feedback | |
| 3 | Creating media - Stop-frame animation | 6 | -To evaluate the impact of adding other media to an animation | -I can add other media to my animation<br>- I can evaluate my final film<br>- I can explain why I added other media to my animation | |
| 3 | Programming A - Sequencing sounds | 1 | -To explore a new programming environment | -I can explain that objects in Scratch have attributes (linked to)<br>- I can identify the objects in a Scratch project (sprites, backdrops)<br>- I can recognise that commands in Scratch are represented as blocks | Scratch, programming, blocks, commands, code, |

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| 3 | Programming A - Sequencing sounds | 2 | -To identify that commands have an outcome | -I can choose a word which describes an on-screen action for my plan<br>- I can create a program following a design<br>- I can identify that each sprite is controlled by the commands I choose | 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. |
| 3 | Programming A - Sequencing sounds | 3 | -To explain that a program has a start | -I can create a sequence of connected commands<br>- I can explain that the objects in my project will respond exactly to the code<br>- I can start a program in different ways | |
| 3 | Programming A - Sequencing sounds | 4 | -To recognise that a sequence of commands can have an order | -I can combine sound commands<br>- I can explain what a sequence is<br>- I can order notes into a sequence | |
| 3 | Programming A - Sequencing sounds | 5 | -To change the appearance of my project | -I can build a sequence of commands<br>- I can decide the actions for each sprite in a program<br>- I can make design choices for my artwork | |
| 3 | Programming A - Sequencing sounds | 6 | -To create a project from a task description | -I can identify and name the objects I will need for a project<br>- I can implement my algorithm as code<br>- I can relate a task description to a design | |
| 3 | Data and information – Branching databases | 1 | -To create questions with yes/no answers | -I can create two groups of objects separated by one attribute<br>- I can investigate questions with yes/no answers<br>- I can make up a yes/no question about a collection of objects | attribute, value, questions, table, objects, branching, |

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| 3 | Data and information – Branching databases | 2 | -To identify the attributes needed to collect data about an object | -I can arrange objects into a tree structure<br>- I can create a group of objects within an existing group<br>- I can select an attribute to separate objects into groups | database, objects, equal, even, separate, structure, compare, order, organise, selecting, information, decision tree. |
| 3 | Data and information – Branching databases | 3 | -To create a branching database | -I can group objects using my own yes/no questions<br>- I can select objects to arrange in a branching database<br>- I can test my branching database to see if it works | |
| 3 | Data and information – Branching databases | 4 | -To explain why it is helpful for a database to be well structured | -I can compare two branching database structures<br>- I can create yes/no questions using given attributes<br>- I can explain that questions need to be ordered carefully to split objects into similarly sized groups | |
| 3 | Data and information – Branching databases | 5 | -To plan the structure of a branching database | -I can create a physical version of a branching database<br>- I can create questions that will enable objects to be uniquely identified<br>- I can independently create questions to use in a branching database | |
| 3 | Data and information – Branching databases | 6 | -To independently create an identification tool | -I can create a branching database that reflects my plan<br>- I can suggest real-world uses for branching databases<br>- I can work with a partner to test my identification tool | |

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| 3 | Creating media – Desktop publishing | 1 | -To recognise how text and images convey information | -I can explain the difference between text and images<br>- I can identify the advantages and disadvantages of using text and images<br>- I can recognise that text and images can communicate messages clearly | text, images, advantages, disadvantages, communicate, font, style, landscape, portrait, orientation, placeholder, template, layout, content, desktop publishing, copy, paste, purpose, benefits. |
| 3 | Creating media – Desktop publishing | 2 | -To recognise that text and layout can be edited | -I can change font style, size, and colours for a given purpose<br>- I can edit text<br>- I can explain that text can be changed to communicate more clearly | |
| 3 | Creating media – Desktop publishing | 3 | -To choose appropriate page settings | -I can create a template for a particular purpose<br>- I can define the term 'page orientation'<br>- I can recognise placeholders and say why they are important | |
| 3 | Creating media – Desktop publishing | 4 | -To add content to a desktop publishing publication | -I can choose the best locations for my content<br>- I can make changes to content after I've added it<br>- I can paste text and images to create a magazine cover | |
| 3 | Creating media – Desktop publishing | 5 | -To consider how different layouts can suit different purposes | -I can choose a suitable layout for a given purpose<br>- I can identify different layouts<br>- I can match a layout to a purpose | |
| 3 | Creating media – Desktop publishing | 6 | -To consider the benefits of desktop publishing | -I can compare work made on desktop publishing to work created by hand<br>- I can identify the uses of desktop publishing in the real world | |

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| | | | | - I can say why desktop publishing might be helpful | |
| 3 | Programming B - Events and actions in programs | 1 | -To explain how a sprite moves in an existing project | -I can choose which keys to use for actions and explain my choices<br>- I can explain the relationship between an event and an action<br>- I can identify a way to improve a program | motion, event, sprite, algorithm, logic, move, resize, extension block, pen up, set up, pen, design, action, debugging, errors, setup, code, test, debug, actions. |
| 3 | Programming B - Events and actions in programs | 2 | -To create a program to move a sprite in four directions | -I can choose a character for my project<br>- I can choose a suitable size for a character in a maze<br>- I can program movement | |
| 3 | Programming B - Events and actions in programs | 3 | -To adapt a program to a new context | -I can choose blocks to set up my program<br>- I can consider the real world when making design choices<br>- I can use a programming extension | |
| 3 | Programming B - Events and actions in programs | 4 | -To develop my program by adding features | -I can build more sequences of commands to make my design work<br>- I can choose suitable keys to turn on additional features<br>- I can identify additional features (from a given set of blocks) | |
| 3 | Programming B - Events and actions in programs | 5 | -To identify and fix bugs in a program | -I can match a piece of code to an outcome<br>- I can modify a program using a design<br>- I can test a program against a given design | |

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| 3 | Programming B - Events and actions in programs | 6 | -To design and create a maze-based challenge | -I can evaluate my project<br>- I can implement my design<br>- I can make design choices and justify them | |
| 4 | Computing systems and networks – The Internet | 1 | -To describe how networks physically connect to other networks | -I can demonstrate how information is shared across the internet<br>- I can describe the internet as a network of networks<br>- I can discuss why a network needs protecting | 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 |
| 4 | Computing systems and networks – The Internet | 2 | -To recognise how networked devices make up the internet | -I can describe networked devices and how they connect<br>- I can explain that the internet is used to provide many services<br>- I can recognise that the World Wide Web contains websites and web pages | |
| 4 | Computing systems and networks – The Internet | 3 | -To outline how websites can be shared via the World Wide Web (WWW) | -I can describe how to access websites on the WWW<br>- I can describe where websites are stored when uploaded to the WWW<br>- I can explain the types of media that can be shared on the WWW | |
| 4 | Computing systems and networks – The Internet | 4 | -To describe how content can be added and accessed on the World Wide Web (WWW) | -I can explain that internet services can be used to create content online<br>- I can explain what media can be found on websites<br>- I can recognise that I can add content to the WWW | |
| 4 | Computing systems and networks – The Internet | 5 | -To recognise how the content of the WWW is created by people | -I can explain that there are rules to protect content<br>- I can explain that websites and their content are created by people<br>- I can suggest who owns the content on websites | |

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| 4 | Computing systems and networks – The Internet | 6 | -To evaluate the consequences of unreliable content | -I can explain that not everything on the World Wide Web is true<br>- I can explain why I need to think carefully before I share or reshare content<br>- I can explain why some information I find online may not be honest, accurate, or legal | |
| 4 | Creating media - Audio production | 1 | -To identify that sound can be recorded | -I can explain that the person who records the sound can say who is allowed to use it<br>- I can identify the input and output devices used to record and play sound<br>- I can use a computer to record audio | audio, microphone, speaker, headphones, input device, output device, sound, podcast, edit, trim, align, layer, import, record, playback, selection, load, save, export, MP3, evaluate, feedback. |
| 4 | Creating media - Audio production | 2 | -To explain that audio recordings can be edited | -I can discuss what sounds can be added to a podcast<br>- I can inspect the soundwave view to know where to trim my recording<br>- I can re-record my voice to improve my recording | |
| 4 | Creating media - Audio production | 3 | -To recognise the different parts of creating a podcast project | -I can explain how sounds can be combined to make a podcast more engaging<br>- I can plan appropriate content for a podcast<br>- I can save my project so the different parts remain editable | |
| 4 | Creating media - Audio production | 4 | -To apply audio editing skills independently | -I can improve my voice recordings<br>- I can record content following my plan<br>- I can review the quality of my recordings | |

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| 4 | Creating media - Audio production | 5 | -To combine audio to enhance my podcast project | -I can arrange multiple sounds to create the effect I want<br>- I can explain the difference between saving a project and exporting an audio file<br>- I can open my project to continue working on it | |
| 4 | Creating media - Audio production | 6 | -To evaluate the effective use of audio | -I can choose appropriate edits to improve my podcast<br>- I can listen to an audio recording to identify its strengths<br>- I can suggest improvements to an audio recording | |
| 4 | Programming A – Repetition in shapes | 1 | -To identify that accuracy in programming is important | -I can create a code snippet for a given purpose<br>- I can explain the effect of changing a value of a command<br>- I can program a computer by typing commands | Logo (programming environment), program, turtle, commands, code snippet, algorithm, design, debug, pattern, repeat, repetition, count-controlled loop, value, trace, decompose, procedure. |
| 4 | Programming A – Repetition in shapes | 2 | -To create a program in a text-based language | -I can test my algorithm in a text-based language<br>- I can use a template to create a design for my program<br>- I can write an algorithm to produce a given outcome | |
| 4 | Programming A – Repetition in shapes | 3 | -To explain what ‘repeat’ means | -I can identify everyday tasks that include repetition as part of a sequence, eg brushing teeth, dance moves<br>- I can identify patterns in a sequence<br>- I can use a count-controlled loop to produce a given outcome | |
| 4 | Programming A – Repetition in shapes | 4 | -To modify a count-controlled loop to produce a given outcome | -I can choose which values to change in a loop<br>- I can identify the effect of changing the number of times a task is repeated<br>- I can predict the outcome of a | |

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| | | | | program containing a count-controlled loop | |
| 4 | Programming A – Repetition in shapes | 5 | -To decompose a task into small steps | -I can explain that a computer can repeatedly call a procedure<br>- I can identify 'chunks' of actions in the real world<br>- I can use a procedure in a program | |
| 4 | Programming A – Repetition in shapes | 6 | -To create a program that uses count-controlled loops to produce a given outcome | -I can design a program that includes count-controlled loops<br>- I can develop my program by debugging it<br>- I can make use of my design to write a program | |
| 4 | Data and information – Data logging | 1 | -To explain that data gathered over time can be used to answer questions | -I can choose a data set to answer a given question<br>- I can identify data that can be gathered over time<br>- I can suggest questions that can be answered using a given data set | data, table, layout, input<br>device, sensor, logger, logging, data point, interval,<br>analyse, dataset, import,<br>export, logged, collection,<br>review, conclusion. |
| 4 | Data and information – Data logging | 2 | -To use a digital device to collect data automatically | -I can explain what data can be collected using sensors<br>- I can identify that data from sensors can be recorded<br>- I can use data from a sensor to answer a given question | |
| 4 | Data and information – Data logging | 3 | -To explain that a data logger collects 'data points' from sensors over time | -I can identify the intervals used to collect data<br>- I can recognise that a data logger collects data at given points<br>- I can talk about the data that I have captured | |

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| 4 | Data and information – Data logging | 4 | -To recognise how a computer can help us analyse data | -I can explain that there are different ways to view data<br>- I can sort data to find information<br>- I can view data at different levels of detail | |
| 4 | Data and information – Data logging | 5 | -To identify the data needed to answer questions | -I can plan how to collect data using a data logger<br>- I can propose a question that can be answered using logged data<br>- I can use a data logger to collect data | |
| 4 | Data and information – Data logging | 6 | -To use data from sensors to answer questions | -I can draw conclusions from the data that I have collected<br>- I can explain the benefits of using a data logger<br>- I can interpret data that has been collected using a data logger | |
| 4 | Creating media – Photo editing | 1 | -To explain that the composition of digital images can be changed | -I can explain why I might crop an image<br>- I can improve an image by rotating it<br>- I can use photo editing software to crop an image | 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, |
| 4 | Creating media – Photo editing | 2 | -To explain that colours can be changed in digital images | -I can experiment with different colour effects<br>- I can explain that different colour effects make you think and feel different things<br>- I can explain why I chose certain colour effects | |
| 4 | Creating media – Photo editing | 3 | -To explain how cloning can be used in photo editing | -I can add to the composition of an image by cloning<br>- I can identify how a photo edit can be improved<br>- I can remove parts of an image using cloning | |

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| 4 | Creating media – Photo editing | 4 | -To explain that images can be combined | -I can experiment with tools to select and copy part of an image<br>- I can explain why photos might be edited<br>- I can use a range of tools to copy between images | foreground, zoom, undo, font. |
| 4 | Creating media – Photo editing | 5 | -To combine images for a purpose | -I can choose suitable images for my project<br>- I can create a project that is a combination of other images<br>- I can describe the image I want to create | |
| 4 | Creating media – Photo editing | 6 | -To evaluate how changes can improve an image | -I can combine text and my image to complete the project<br>- I can review images against a given criteria<br>- I can use feedback to guide making changes | |
| 4 | Programming B – Repetition in games | 1 | -To develop the use of count-controlled loops in a different programming environment | -I can list an everyday task as a set of instructions including repetition<br>- I can modify a snippet of code to create a given outcome<br>- I can predict the outcome of a snippet of code | 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, |
| 4 | Programming B – Repetition in games | 2 | -To explain that in programming there are infinite loops and count controlled loops | -I can choose when to use a count-controlled and an infinite loop<br>- I can modify loops to produce a given outcome<br>- I can recognise that some programming languages enable more than one process to be run at once | |
| 4 | Programming B – Repetition in games | 3 | -To develop a design that includes two or more loops which run at the same time | -I can choose which action will be repeated for each object<br>- I can evaluate the effectiveness of the repeated sequences used in my program<br>- I can explain what the outcome of the repeated action should be | |

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| 4 | Programming B – Repetition in games | 4 | -To modify an infinite loop in a given program | -I can explain the effect of my changes<br>- I can identify which parts of a loop can be changed<br>- I can re-use existing code snippets on new sprites | evaluate. |
| 4 | Programming B – Repetition in games | 5 | -To design a project that includes repetition | -I can develop my own design explaining what my project will do<br>- I can evaluate the use of repetition in a project<br>- I can select key parts of a given project to use in my own design | |
| 4 | Programming B – Repetition in games | 6 | -To create a project that includes repetition | -I can build a program that follows my design<br>- I can evaluate the steps I followed when building my project<br>- I can refine the algorithm in my design | |
| 5 | Computing systems and networks - Systems and searching | 1 | -To explain that computers can be connected together to form systems | -I can describe that a computer system features inputs, processes, and outputs<br>- I can explain that computer systems communicate with other devices<br>- I can explain that systems are built using a number of parts | system, connection, digital, input, process, storage, output, search, search engine, refine, index, bot, ordering, links, algorithm, search engine optimisation (SEO), web crawler, content |
| 5 | Computing systems and networks - Systems and searching | 2 | -To recognise the role of computer systems in our lives | -I can explain the benefits of a given computer system<br>- I can identify tasks that are managed by computer systems<br>- I can identify the human elements of a computer system | |
| 5 | Computing systems and networks - Systems and searching | 3 | -To experiment with search engines | -I can compare results from different search engines<br>- I can make use of a web search to find specific information<br>- I can refine my web search | |

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| 5 | Computing systems and networks - Systems and searching | 4 | -To describe how search engines select results | -I can explain why we need tools to find things online<br>- I can recognise the role of web crawlers in creating an index<br>- I can relate a search term to the search engine's index | creator, selection, ranking. |
| 5 | Computing systems and networks - Systems and searching | 5 | -To explain how search results are ranked | -I can explain that a search engine follows rules to rank results<br>- I can give examples of criteria used by search engines to rank results<br>- I can order a list by rank | |
| 5 | Computing systems and networks - Systems and searching | 6 | -To recognise why the order of results is important, and to whom | -I can describe some of the ways that search results can be influenced<br>- I can explain how search engines make money<br>- I can recognise some of the limitations of search engines | |
| 5 | Creating media - Video production | 1 | -To explain what makes a video effective | -I can compare features in different videos<br>- I can explain that video is a visual media format<br>- I can identify features of videos | 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), |
| 5 | Creating media - Video production | 2 | -To identify digital devices that can record video | -I can experiment with different camera angles<br>- I can identify and find features on a digital video recording device<br>- I can make use of a microphone | |
| 5 | Creating media - Video production | 3 | -To capture video using a range of techniques | -I can capture video using a range of filming techniques<br>- I can review how effective my video is<br>- I can suggest filming techniques for a given purpose | |

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| 5 | Creating media - Video production | 4 | -To create a storyboard | -I can create and save video content<br>- I can decide which filming techniques I will use<br>- I can outline the scenes of my video | static, zoom, pan, tilt, storyboard, filming, review, import, split, trim, clip, edit, reshoot, delete, reorder, export, evaluate, share. |
| 5 | Creating media - Video production | 5 | -To identify that video can be improved through reshooting and editing | -I can explain how to improve a video by reshooting and editing<br>- I can select the correct tools to make edits to my video<br>- I can store, retrieve, and export my recording to a computer | |
| 5 | Creating media - Video production | 6 | -To consider the impact of the choices made when making and sharing a video | -I can evaluate my video and share my opinions<br>- I can make edits to my video and improve the final outcome<br>- I can recognise that my choices when making a video will impact on the quality of the final outcome | |
| 5 | Programming A – Selection in physical computing | 1 | -To control a simple circuit connected to a computer | -I can create a simple circuit and connect it to a microcontroller<br>- I can explain what an infinite loop does<br>- I can program a microcontroller to make an LED switch on | microcontroller, USB, components, connection, infinite loop, output component, motor, repetition, count-controlled loop, Crumble controller, switch, LED, Sparkle, crocodile clips, connect, |
| 5 | Programming A – Selection in physical computing | 2 | -To write a program that includes count-controlled loops | -I can connect more than one output component to a microcontroller<br>- I can design sequences that use count-controlled loops<br>- I can use a count-controlled loop to control outputs | |
| 5 | Programming A – Selection in physical computing | 3 | -To explain that a loop can stop when a condition is met | -I can design a conditional loop<br>- I can explain that a condition is either true or false<br>- I can program a microcontroller to respond to an input | |

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| 5 | Programming A – Selection in physical computing | 4 | -To explain that a loop can be used to repeatedly check whether a condition has been met | -I can explain that a condition being met can start an action<br>- I can identify a condition and an action in my project<br>- I can use selection (an 'if…then…' statement) to direct the flow of a program | battery box, program, condition, Input, output, selection, action, debug, circuit, power, cell, buzzer |
| 5 | Programming A – Selection in physical computing | 5 | -To design a physical project that includes selection | -I can create a detailed drawing of my project<br>- I can describe what my project will do<br>- I can identify a real-world example of a condition starting an action | |
| 5 | Programming A – Selection in physical computing | 6 | -To create a program that controls a physical computing project | -I can test and debug my project<br>- I can use selection to produce an intended outcome<br>- I can write an algorithm that describes what my model will do | |
| 5 | Data and information – Flat-file databases | 1 | -To use a form to record information | -I can create a database using cards<br>- I can explain how information can be recorded<br>- I can order, sort, and group my data cards | database, data, information, record, field, sort, order, group, search, value, criteria, graph, chart, axis, compare, filter, presentation. |
| 5 | Data and information – Flat-file databases | 2 | -To compare paper and computer-based databases | -I can choose which field to sort data by to answer a given question<br>- I can explain what a field and a record is in a database<br>- I can navigate a flat-file database to compare different views of information | |
| 5 | Data and information – Flat-file databases | 3 | -To outline how you can answer questions by grouping and then sorting data | -I can combine grouping and sorting to answer specific questions<br>- I can explain that data can be grouped using chosen values<br>- I can group information using a database | |

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| 5 | Data and information – Flat-file databases | 4 | -To explain that tools can be used to select specific data | -I can choose multiple criteria to answer a given question<br>- I can choose which field and value are required to answer a given question<br>- I can outline how 'AND' and 'OR' can be used to refine data selection | |
| 5 | Data and information – Flat-file databases | 5 | -To explain that computer programs can be used to compare data visually | -I can explain the benefits of using a computer to create charts<br>- I can refine a chart by selecting a particular filter<br>- I can select an appropriate chart to visually compare data | |
| 5 | Data and information – Flat-file databases | 6 | -To use a real-world database to answer questions | -I can ask questions that will need more than one field to answer<br>- I can present my findings to a group<br>- I can refine a search in a real-world context | |
| 5 | Creating media – Introduction to vector graphics | 1 | -To identify that drawing tools can be used to produce different outcomes | -I can discuss how vector drawings are different from paper-based drawings<br>- I can experiment with the shape and line tools<br>- I can recognise that vector drawings are made using shapes | vector, drawing tools, object, toolbar, vector drawing, move, resize, colour, rotate, duplicate/copy, zoom, select, align, modify, layers, |
| 5 | Creating media – Introduction to vector graphics | 2 | -To create a vector drawing by combining shapes | -I can explain that each element added to a vector drawing is an object<br>- I can identify the shapes used to make a vector drawing<br>- I can move, resize, and rotate objects I have duplicated | |

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| 5 | Creating media – Introduction to vector graphics | 3 | -To use tools to achieve a desired effect | -I can explain how alignment grids and resize handles can be used to improve consistency<br>- I can modify objects to create a new image<br>- I can use the zoom tool to help me add detail to my drawings | order, copy, paste, group, ungroup, reuse, reflection |
| 5 | Creating media – Introduction to vector graphics | 4 | -To recognise that vector drawings consist of layers | -I can change the order of layers in a vector drawing<br>- I can identify that each added object creates a new layer in the drawing<br>- I can use layering to create an image | |
| 5 | Creating media – Introduction to vector graphics | 5 | -To group objects to make them easier to work with | -I can copy part of a drawing by duplicating several objects<br>- I can recognise when I need to group and ungroup objects<br>- I can reuse a group of objects to further develop my vector drawing | |
| 5 | Creating media – Introduction to vector graphics | 6 | -To apply what I have learned about vector drawings | -I can compare vector drawings to freehand paint drawings<br>- I can create a vector drawing for a specific purpose<br>- I can reflect on the skills I have used and why I have used them | |
| 5 | Programming B – Selection in quizzes | 1 | -To explain how selection is used in computer programs | -I can identify conditions in a program<br>- I can modify a condition in a program<br>- I can recall how conditions are used in selection | Selection, condition, true, false, count-controlled loop, outcomes, conditional statement, algorithm, program, debug, question, |
| 5 | Programming B – Selection in quizzes | 2 | -To relate that a conditional statement connects a condition to an outcome | -I can create a program with different outcomes using selection<br>- I can identify the condition and outcomes in an 'if... then… else...' statement<br>- I can use selection in an infinite loop to check a condition | |

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| 5 | Programming B – Selection in quizzes | 3 | -To explain how selection directs the flow of a program | -I can design the flow of a program which contains 'if… then… else…'<br>- I can explain that program flow can branch according to a condition<br>- I can show that a condition can direct program flow in one of two ways | answer, task, design, input, implement, test, run, setup, operator |
| 5 | Programming B – Selection in quizzes | 4 | -To design a program which uses selection | -I can identify the outcome of user input in an algorithm<br>- I can outline a given task<br>- I can use a design format to outline my project | |
| 5 | Programming B – Selection in quizzes | 5 | -To create a program which uses selection | -I can implement my algorithm to create the first section of my program<br>- I can share my program with others<br>- I can test my program | |
| 5 | Programming B – Selection in quizzes | 6 | -To evaluate my program | -I can extend my program further<br>- I can identify the setup code I need in my program<br>- I can identify ways the program could be improved | |
| 6 | Computing systems and networks - Communication and collaboration | 1 | -To explain the importance of internet addresses | -I can describe how computers use addresses to access websites<br>- I can explain that internet devices have addresses<br>- I can recognise that data is transferred using agreed methods | communication, protocol, data, address, Internet Protocol (IP), Domain Name Server (DNS), packet, header, data payload, chat, |
| 6 | Computing systems and networks - Communication and collaboration | 2 | -To recognise how data is transferred across the internet | -I can explain that all data transferred over the internet is in packets<br>- I can explain that data is transferred over networks in packets<br>- I can identify and explain the main parts of a data packet | |

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| 6 | Computing systems and networks - Communication and collaboration | 3 | -To explain how sharing information online can help people to work together | -I can explain that the internet allows different media to be shared<br>- I can recognise how to access shared files stored online<br>- I can send information over the internet in different ways | explore, slide deck, reuse, remix, collaboration, internet, public, private, one way, two-way, one-to-one, one-to-many. |
| 6 | Computing systems and networks - Communication and collaboration | 4 | -To evaluate different ways of working together online | -I can explain how the internet enables effective collaboration<br>- I can identify different ways of working together online<br>- I can recognise that working together on the internet can be public or private | |
| 6 | Computing systems and networks - Communication and collaboration | 5 | -To recognise how we communicate using technology | -I can choose methods of communication to suit particular purposes<br>- I can explain the different ways in which people communicate<br>- I can identify that there are a variety of ways to communicate over the internet | |
| 6 | Computing systems and networks - Communication and collaboration | 6 | -To evaluate different methods of online communication | -I can compare different methods of communicating on the internet<br>- I can decide when I should and should not share information online<br>- I can explain that communication on the internet may not be private | |
| 6 | Creating media – Web page creation | 1 | -To review an existing website and consider its structure | -I can discuss the different types of media used on websites<br>- I can explore a website<br>- I know that websites are written in HTML | website, web page, browser, media, Hypertext Markup |

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| 6 | Creating media – Web page creation | 2 | -To plan the features of a web page | -I can draw a web page layout that suits my purpose<br>- I can recognise the common features of a web page<br>- I can suggest media to include on my page | 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. |
| 6 | Creating media – Web page creation | 3 | -To consider the ownership and use of images (copyright) | -I can describe what is meant by the term 'fair use'<br>- I can find copyright-free images<br>- I can say why I should use copyright-free images | |
| 6 | Creating media – Web page creation | 4 | -To recognise the need to preview pages | -I can add content to my own web page<br>- I can evaluate what my web page looks like on different devices and suggest/make edits<br>- I can preview what my web page looks like | |
| 6 | Creating media – Web page creation | 5 | -To outline the need for a navigation path | -I can describe why navigation paths are useful<br>- I can explain what a navigation path is<br>- I can make multiple web pages and link them using hyperlinks | |
| 6 | Creating media – Web page creation | 6 | -To recognise the implications of linking to content owned by other people | -I can create hyperlinks to link to other people's work<br>- I can evaluate the user experience of a website<br>- I can explain the implication of linking to content owned by others | |
| 6 | Programming A – Variables in games | 1 | -To define a 'variable' as something that is changeable | -I can explain that the way a variable changes can be defined<br>- I can identify examples of information that is variable<br>- I can identify that variables can hold numbers or letters | variable, change, name, value, set, design, event, |

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| 6 | Programming A – Variables in games | 2 | -To explain why a variable is used in a program | -I can explain that a variable has a name and a value<br>- I can identify a program variable as a placeholder in memory for a single value<br>- I can recognise that the value of a variable can be changed | algorithm, code, task, artwork, program, project, code, test, debug, improve, evaluate, share, assign, declare |
| 6 | Programming A – Variables in games | 3 | -To choose how to improve a game by using variables | -I can decide where in a program to change a variable<br>- I can make use of an event in a program to set a variable<br>- I can recognise that the value of a variable can be used by a program | |
| 6 | Programming A – Variables in games | 4 | -To design a project that builds on a given example | -I can choose the artwork for my project<br>- I can create algorithms for my project<br>- I can explain my design choices | |
| 6 | Programming A – Variables in games | 5 | -To use my design to create a project | -I can choose a name that identifies the role of a variable<br>- I can create the artwork for my project<br>- I can test the code that I have written | |
| 6 | Programming A – Variables in games | 6 | -To evaluate my project | -I can identify ways that my game could be improved<br>- I can share my game with others<br>- I can use variables to extend my game | |
| 6 | Data and information – Spreadsheets | 1 | -To create a data set in a spreadsheet | -I can collect data<br>- I can enter data into a spreadsheet<br>- I can suggest how to structure my data | data, collecting, table, structure, spreadsheet, cell, |

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| 6 | Data and information – Spreadsheets | 2 | -To build a data set in a spreadsheet | -I can apply an appropriate format to a cell<br>- I can choose an appropriate format for a cell<br>- I can explain what an item of data is | cell reference, data item, format, formula, calculation, spreadsheet, input, output, operation, range, duplicate, sigma, propose, question, data set, organised, chart, evaluate, results, sum, comparison, software, tools. |
| 6 | Data and information – Spreadsheets | 3 | -To explain that formulas can be used to produce calculated data | -I can construct a formula in a spreadsheet<br>- I can explain which data types can be used in calculations<br>- I can identify that changing inputs changes outputs | |
| 6 | Data and information – Spreadsheets | 4 | -To apply formulas to data | -I can apply a formula to multiple cells by duplicating it<br>- I can calculate data using different operations<br>- I can create a formula which includes a range of cells | |
| 6 | Data and information – Spreadsheets | 5 | -To create a spreadsheet to plan an event | -I can apply a formula to calculate the data I need to answer questions<br>- I can explain why data should be organised<br>- I can use a spreadsheet to answer questions | |
| 6 | Data and information – Spreadsheets | 6 | -To choose suitable ways to present data | -I can produce a chart<br>- I can suggest when to use a table or chart<br>- I can use a chart to show the answer to questions | |
| 6 | Creating media – 3D Modelling | 1 | -To recognise that you can work in three dimensions on a computer | -I can add 3D shapes to a project<br>- I can move 3D shapes relative to one another<br>- I can view 3D shapes from different perspectives | TinkerCAD, 2D, 3D, shapes, select, move, perspective, |

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| 6 | Creating media – 3D Modelling | 2 | -To identify that digital 3D objects can be modified | -I can lift/lower 3D objects<br>- I can recolour a 3D object<br>- I can resize an object in three dimensions | view, handles, resize, lift, lower, recolour, rotate, duplicate, group, cylinder, cube, cuboid, sphere, cone, prism, pyramid, placeholder, hollow, choose, combine, construct, evaluate, modify. |
| 6 | Creating media – 3D Modelling | 3 | -To recognise that objects can be combined in a 3D model | -I can duplicate 3D objects<br>- I can group 3D objects<br>- I can rotate objects in three dimensions | |
| 6 | Creating media – 3D Modelling | 4 | -To create a 3D model for a given purpose | -I can accurately size 3D objects<br>- I can combine a number of 3D objects<br>- I can show that placeholders can create holes in 3D objects | |
| 6 | Creating media – 3D Modelling | 5 | -To plan my own 3D model | -I can analyse a 3D model<br>- I can choose objects to use in a 3D model<br>- I can combine objects in a design | |
| 6 | Creating media – 3D Modelling | 6 | -To create my own digital 3D model | -I can construct a 3D model based on a design<br>- I can explain how my 3D model could be improved<br>- I can modify my 3D model to improve it | |
| 6 | Programming B - Sensing movement | 1 | -To create a program to run on a controllable device | -I can apply my knowledge of programming to a new environment<br>- I can test my program on an emulator<br>- I can transfer my program to a controllable device | Micro:bit, MakeCode, input, process, output, flashing, |

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| 6 | Programming B - Sensing movement | 2 | -To explain that selection can control the flow of a program | -I can determine the flow of a program using selection<br>- I can identify examples of conditions in the real world<br>- I can use a variable in an if, then, else statement to select the flow of a program | 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. |
| 6 | Programming B - Sensing movement | 3 | -To update a variable with a user input | -I can experiment with different physical inputs<br>- I can explain that checking a variable doesn't change its value<br>- I can use a condition to change a variable | |
| 6 | Programming B - Sensing movement | 4 | -To use a conditional statement to compare a variable to a value | -I can explain the importance of the order of conditions in else, if statements<br>- I can modify a program to achieve a different outcome<br>- I can use an operand (e.g. <>=) in an if, then statement | |
| 6 | Programming B - Sensing movement | 5 | -To design a project that uses inputs and outputs on a controllable device | -I can decide what variables to include in a project<br>- I can design the algorithm for my project<br>- I can design the program flow for my project | |
| 6 | Programming B - Sensing movement | 6 | -To develop a program to use inputs and outputs on a controllable device | -I can create a program based on my design<br>- I can test my program against my design<br>- I can use a range of approaches to find and fix bugs | |