Year Group	Unit Name	Lesson
3	Computing systems and networks – Connecting computers	1
3	Computing systems and networks – Connecting computers	2
3	Computing systems and networks – Connecting computers	3
3	Computing systems and networks – Connecting computers	4
3	Computing systems and networks – Connecting computers	5
3	Computing systems and networks – Connecting computers	6
3	Creating media - Stop-frame animation	1
3	Creating media - Stop-frame animation	2
3	Creating media - Stop-frame animation	3
3	Creating media - Stop-frame animation	4

3	Creating media - Stop-frame animation	5
3	Creating media - Stop-frame animation	6
3	Programming A - Sequencing sounds	1
3	Programming A - Sequencing sounds	2
3	Programming A - Sequencing sounds	3
3	Programming A - Sequencing sounds	4
3	Programming A - Sequencing sounds	5
3	Programming A - Sequencing sounds	6
3	Data and information – Branching databases	1
3	Data and information – Branching databases	2
3	Data and information – Branching databases	3

3	Data and information – Branching databases	4
3	Data and information – Branching databases	5
3	Data and information – Branching databases	6
3	Creating media – Desktop publishing	1
3	Creating media – Desktop publishing	2
3	Creating media – Desktop publishing	3
3	Creating media – Desktop publishing	4
3	Creating media – Desktop publishing	5
3	Creating media – Desktop publishing	6
3	Programming B - Events and actions in programs	1
3	Programming B - Events and actions in programs	2

3	Programming B - Events and actions in programs	3
3	Programming B - Events and actions in programs	4
3	Programming B - Events and actions in programs	5
3	Programming B - Events and actions in programs	6
4	Computing systems and networks – The Internet	1
4	Computing systems and networks – The Internet	2
4	Computing systems and networks – The Internet	3
4	Computing systems and networks – The Internet	4
4	Computing systems and networks – The Internet	5
4	Computing systems and networks – The Internet	6
4	Creating media - Audio production	1

4	Creating media - Audio production	2
4	Creating media - Audio production	3
4	Creating media - Audio production	4
4	Creating media - Audio production	5
4	Creating media - Audio production	6
4	Programming A – Repetition in shapes	1
4	Programming A – Repetition in shapes	2
4	Programming A – Repetition in shapes	3
4	Programming A – Repetition in shapes	4
4	Programming A – Repetition in shapes	5
4	Programming A – Repetition in shapes	6

4	Data and information – Data logging	1
4	Data and information – Data logging	2
4	Data and information – Data logging	3
4	Data and information – Data logging	4
4	Data and information – Data logging	5
4	Data and information – Data logging	6
4	Creating media – Photo editing	1
4	Creating media – Photo editing	2
4	Creating media – Photo editing	3
4	Creating media – Photo editing	4
4	Creating media – Photo editing	5

4	Creating media – Photo editing	6
4	Programming B – Repetition in games	1
4	Programming B – Repetition in games	2
4	Programming B – Repetition in games	3
4	Programming B – Repetition in games	4
4	Programming B – Repetition in games	5
4	Programming B – Repetition in games	6
5	Computing systems and networks - Systems and searching	1
5	Computing systems and networks - Systems and searching	2
5	Computing systems and networks - Systems and searching	3
5	Computing systems and networks - Systems and searching	4

5	Computing systems and networks - Systems and searching	5
5	Computing systems and networks - Systems and searching	6
5	Creating media - Video production	1
5	Creating media - Video production	2
5	Creating media - Video production	3
5	Creating media - Video production	4
5	Creating media - Video production	5
5	Creating media - Video production	6
5	Programming A – Selection in physical computing	1
5	Programming A – Selection in physical computing	2
5	Programming A – Selection in physical computing	3

5	Programming A – Selection in physical computing	4
5	Programming A – Selection in physical computing	5
5	Programming A – Selection in physical computing	6
5	Data and information – Flat-file databases	1
5	Data and information – Flat-file databases	2
5	Data and information – Flat-file databases	3
5	Data and information – Flat-file databases	4
5	Data and information – Flat-file databases	5
5	Data and information – Flat-file databases	6
5	Creating media – Introduction to vector graphics	1
5	Creating media – Introduction to vector graphics	2

5	Creating media – Introduction to vector graphics	3
5	Creating media – Introduction to vector graphics	4
5	Creating media – Introduction to vector graphics	5
5	Creating media – Introduction to vector graphics	6
5	Programming B – Selection in quizzes	1
5	Programming B – Selection in quizzes	2
5	Programming B – Selection in quizzes	3
5	Programming B – Selection in quizzes	4
5	Programming B – Selection in quizzes	5
5	Programming B – Selection in quizzes	6
6	Computing systems and networks - Communication and collaboration	1

6	Computing systems and networks - Communication and collaboration	2
6	Computing systems and networks - Communication and collaboration	3
6	Computing systems and networks - Communication and collaboration	4
6	Computing systems and networks - Communication and collaboration	5
6	Computing systems and networks - Communication and collaboration	6
6	Creating media – Web page creation	1
6	Creating media – Web page creation	2
6	Creating media – Web page creation	3
6	Creating media – Web page creation	4
6	Creating media – Web page creation	5
6	Creating media – Web page creation	6

6	Programming A – Variables in games	1
6	Programming A – Variables in games	2
6	Programming A – Variables in games	3
6	Programming A – Variables in games	4
6	Programming A – Variables in games	5
6	Programming A – Variables in games	6
6	Data and information – Spreadsheets	1
6	Data and information – Spreadsheets	2
6	Data and information – Spreadsheets	3
6	Data and information – Spreadsheets	4
6	Data and information – Spreadsheets	5

6	Data and information – Spreadsheets	6
6	Creating media – 3D Modelling	1
6	Creating media – 3D Modelling	2
6	Creating media – 3D Modelling	3
6	Creating media – 3D Modelling	4
6	Creating media – 3D Modelling	5
6	Creating media – 3D Modelling	6
6	Programming B - Sensing movement	1
6	Programming B - Sensing movement	2
6	Programming B - Sensing movement	3
6	Programming B - Sensing movement	4

6	Programming B - Sensing movement	5
6	Programming B - Sensing movement	6

Learning Objectives
-To explain how digital devices function
-To identify input and output devices
-To recognise how digital devices can change the way we work
-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
-To explain that animation is a sequence of drawings or photographs
-To relate animated movement with a sequence of images
-To plan an animation
-To identify the need to work consistently and carefully

-To review and improve an animation
-To evaluate the impact of adding other media to an animation
-To explore a new programming environment
-To identify that commands have an outcome
-To explain that a program has a start
-To recognise that a sequence of commands can have an order
-To change the appearance of my project
-To create a project from a task description
-To create questions with yes/no answers
-To identify the attributes needed to collect data about an object
-To create a branching database

-To explain why it is helpful for a database to be well structured
-To plan the structure of a branching database
-To independently create an identification tool
-To recognise how text and images convey information
-To recognise that text and layout can be edited
-To choose appropriate page settings
-To add content to a desktop publishing publication
-To consider how different layouts can suit different purposes
-To consider the benefits of desktop publishing
-To explain how a sprite moves in an existing project
-To create a program to move a sprite in four directions

-To adapt a program to a new context
-To develop my program by adding features
-To identify and fix bugs in a program
-To design and create a maze-based challenge
-To describe how networks physically connect to other networks
-To recognise how networked devices make up the internet
-To outline how websites can be shared via the World Wide Web (WWW)
-To describe how content can be added and accessed on the World Wide Web (WWW)
-To recognise how the content of the WWW is created by people
-To evaluate the consequences of unreliable content
-To identify that sound can be recorded

-To explain that audio recordings can be edited
-To recognise the different parts of creating a podcast project
-To apply audio editing skills independently
-To combine audio to enhance my podcast project
-To evaluate the effective use of audio
-To identify that accuracy in programming is important
-To create a program in a text-based language
-To explain what ‘repeat’ means
-To modify a count-controlled loop to produce a given outcome
-To decompose a task into small steps
-To create a program that uses count-controlled loops to produce a given outcome

-To explain that data gathered over time can be used to answer questions
-To use a digital device to collect data automatically
-To explain that a data logger collects ‘data points’ from sensors over time
-To recognise how a computer can help us analyse data
-To identify the data needed to answer questions
-To use data from sensors to answer questions
-To explain that the composition of digital images can be changed
-To explain that colours can be changed in digital images
-To explain how cloning can be used in photo editing
-To explain that images can be combined
-To combine images for a purpose

-To evaluate how changes can improve an image
-To develop the use of count-controlled loops in a different programming environment
-To explain that in programming there are infinite loops and count controlled loops
-To develop a design that includes two or more loops which run at the same time
-To modify an infinite loop in a given program
-To design a project that includes repetition
-To create a project that includes repetition
-To explain that computers can be connected together to form systems
-To recognise the role of computer systems in our lives
-To experiment with search engines
-To describe how search engines select results

-To explain how search results are ranked
-To recognise why the order of results is important, and to whom
-To explain what makes a video effective
-To identify digital devices that can record video
-To capture video using a range of techniques
-To create a storyboard
-To identify that video can be improved through reshooting and editing
-To consider the impact of the choices made when making and sharing a video
-To control a simple circuit connected to a computer
-To write a program that includes count-controlled loops
-To explain that a loop can stop when a condition is met

-To explain that a loop can be used to repeatedly check whether a condition has been met
-To design a physical project that includes selection
-To create a program that controls a physical computing project
-To use a form to record information
-To compare paper and computer-based databases
-To outline how you can answer questions by grouping and then sorting data
-To explain that tools can be used to select specific data
-To explain that computer programs can be used to compare data visually
-To use a real-world database to answer questions
-To identify that drawing tools can be used to produce different outcomes
-To create a vector drawing by combining shapes

-To use tools to achieve a desired effect
-To recognise that vector drawings consist of layers
-To group objects to make them easier to work with
-To apply what I have learned about vector drawings
-To explain how selection is used in computer programs
-To relate that a conditional statement connects a condition to an outcome
-To explain how selection directs the flow of a program
-To design a program which uses selection
-To create a program which uses selection
-To evaluate my program
-To explain the importance of internet addresses

-To recognise how data is transferred across the internet
-To explain how sharing information online can help people to work together
-To evaluate different ways of working together online
-To recognise how we communicate using technology
-To evaluate different methods of online communication
-To review an existing website and consider its structure
-To plan the features of a web page
-To consider the ownership and use of images (copyright)
-To recognise the need to preview pages
-To outline the need for a navigation path
-To recognise the implications of linking to content owned by other people

-To define a ‘variable’ as something that is changeable
-To explain why a variable is used in a program
-To choose how to improve a game by using variables
-To design a project that builds on a given example
-To use my design to create a project
-To evaluate my project
-To create a data set in a spreadsheet
-To build a data set in a spreadsheet
-To explain that formulas can be used to produce calculated data
-To apply formulas to data
-To create a spreadsheet to plan an event

-To choose suitable ways to present data
-To recognise that you can work in three dimensions on a computer
-To identify that digital 3D objects can be modified
-To recognise that objects can be combined in a 3D model
-To create a 3D model for a given purpose
-To plan my own 3D model
-To create my own digital 3D model
-To create a program to run on a controllable device
-To explain that selection can control the flow of a program
-To update a variable with a user input
-To use a conditional statement to compare a variable to a value

-To design a project that uses inputs and outputs on a controllable device
-To develop a program to use inputs and outputs on a controllable device

Success Criteria
-I can explain that digital devices accept inputs - I can explain that digital devices produce outputs - I can follow a process
-I can classify input and output devices - I can describe a simple process - I can design a digital device
-I can explain how I use digital devices for different activities - I can recognise similarities between using digital devices and non-digital tools - I can suggest differences between using digital devices and non-digital tools
-I can discuss why we need a network switch - I can explain how messages are passed through multiple connections - I can recognise different connections
-I can demonstrate how information can be passed between devices - I can explain the role of a switch, server, and wireless access point in a network - I can recognise that a computer network is made up of a number of devices
-I can identify how devices in a network are connected together - I can identify networked devices around me - I can identify the benefits of computer networks
-I can create an effective flip book—style animation - I can draw a sequence of pictures - I can explain how an animation/flip book works
-I can create an effective stop-frame animation - I can explain why little changes are needed for each frame - I can predict what an animation will look like
-I can break down a story into settings, characters and events - I can create a storyboard - I can describe an animation that is achievable on screen
-I can evaluate the quality of my animation - I can review a sequence of frames to check my work - I can use onion skinning to help me make small changes between frames

-I can evaluate another learner's animation - I can explain ways to make my animation better - I can improve my animation based on feedback
-I can add other media to my animation - I can evaluate my final film - I can explain why I added other media to my animation
-I can explain that objects in Scratch have attributes (linked to) - I can identify the objects in a Scratch project (sprites, backdrops) - I can recognise that commands in Scratch are represented as blocks
-I can choose a word which describes an on-screen action for my plan - I can create a program following a design - I can identify that each sprite is controlled by the commands I choose
-I can create a sequence of connected commands - I can explain that the objects in my project will respond exactly to the code - I can start a program in different ways
-I can combine sound commands - I can explain what a sequence is - I can order notes into a sequence
-I can build a sequence of commands - I can decide the actions for each sprite in a program - I can make design choices for my artwork
-I can identify and name the objects I will need for a project - I can implement my algorithm as code - I can relate a task description to a design
-I can create two groups of objects separated by one attribute - I can investigate questions with yes/no answers - I can make up a yes/no question about a collection of objects
-I can arrange objects into a tree structure - I can create a group of objects within an existing group - I can select an attribute to separate objects into groups
-I can group objects using my own yes/no questions - I can select objects to arrange in a branching database - I can test my branching database to see if it works

-I can compare two branching database structures - I can create yes/no questions using given attributes - I can explain that questions need to be ordered carefully to split objects into similarly sized groups
-I can create a physical version of a branching database - I can create questions that will enable objects to be uniquely identified - I can independently create questions to use in a branching database
-I can create a branching database that reflects my plan - I can suggest real-world uses for branching databases - I can work with a partner to test my identification tool
-I can explain the difference between text and images - I can identify the advantages and disadvantages of using text and images - I can recognise that text and images can communicate messages clearly
-I can change font style, size, and colours for a given purpose - I can edit text - I can explain that text can be changed to communicate more clearly
-I can create a template for a particular purpose - I can define the term 'page orientation' - I can recognise placeholders and say why they are important
-I can choose the best locations for my content - I can make changes to content after I've added it - I can paste text and images to create a magazine cover
-I can choose a suitable layout for a given purpose - I can identify different layouts - I can match a layout to a purpose
-I can compare work made on desktop publishing to work created by hand - I can identify the uses of desktop publishing in the real world - I can say why desktop publishing might be helpful
-I can choose which keys to use for actions and explain my choices - I can explain the relationship between an event and an action - I can identify a way to improve a program
-I can choose a character for my project - I can choose a suitable size for a character in a maze - I can program movement

-I can choose blocks to set up my program - I can consider the real world when making design choices - I can use a programming extension
-I can build more sequences of commands to make my design work - I can choose suitable keys to turn on additional features - I can identify additional features (from a given set of blocks)
-I can match a piece of code to an outcome - I can modify a program using a design - I can test a program against a given design
-I can evaluate my project - I can implement my design - I can make design choices and justify them
-I can demonstrate how information is shared across the internet - I can describe the internet as a network of networks - I can discuss why a network needs protecting
-I can describe networked devices and how they connect - I can explain that the internet is used to provide many services - I can recognise that the World Wide Web contains websites and web pages
-I can describe how to access websites on the WWW - I can describe where websites are stored when uploaded to the WWW - I can explain the types of media that can be shared on the WWW
-I can explain that internet services can be used to create content online - I can explain what media can be found on websites - I can recognise that I can add content to the WWW
-I can explain that there are rules to protect content - I can explain that websites and their content are created by people - I can suggest who owns the content on websites
-I can explain that not everything on the World Wide Web is true - I can explain why I need to think carefully before I share or reshare content - I can explain why some information I find online may not be honest, accurate, or legal
-I can explain that the person who records the sound can say who is allowed to use it - I can identify the input and output devices used to record and play sound - I can use a computer to record audio

-I can discuss what sounds can be added to a podcast - I can inspect the soundwave view to know where to trim my recording - I can re-record my voice to improve my recording
-I can explain how sounds can be combined to make a podcast more engaging - I can plan appropriate content for a podcast - I can save my project so the different parts remain editable
-I can improve my voice recordings - I can record content following my plan - I can review the quality of my recordings
-I can arrange multiple sounds to create the effect I want - I can explain the difference between saving a project and exporting an audio file - I can open my project to continue working on it
-I can choose appropriate edits to improve my podcast - I can listen to an audio recording to identify its strengths - I can suggest improvements to an audio recording
-I can create a code snippet for a given purpose - I can explain the effect of changing a value of a command - I can program a computer by typing commands
-I can test my algorithm in a text-based language - I can use a template to create a design for my program - I can write an algorithm to produce a given outcome
-I can identify everyday tasks that include repetition as part of a sequence, eg brushing teeth, dance moves - I can identify patterns in a sequence - I can use a count-controlled loop to produce a given outcome
-I can choose which values to change in a loop - I can identify the effect of changing the number of times a task is repeated - I can predict the outcome of a program containing a count-controlled loop
-I can explain that a computer can repeatedly call a procedure - I can identify ‘chunks’ of actions in the real world - I can use a procedure in a program
-I can design a program that includes count-controlled loops - I can develop my program by debugging it - I can make use of my design to write a program

-I can choose a data set to answer a given question - I can identify data that can be gathered over time - I can suggest questions that can be answered using a given data set
-I can explain what data can be collected using sensors - I can identify that data from sensors can be recorded - I can use data from a sensor to answer a given question
-I can identify the intervals used to collect data - I can recognise that a data logger collects data at given points - I can talk about the data that I have captured
-I can explain that there are different ways to view data - I can sort data to find information - I can view data at different levels of detail
-I can plan how to collect data using a data logger - I can propose a question that can be answered using logged data - I can use a data logger to collect data
-I can draw conclusions from the data that I have collected - I can explain the benefits of using a data logger - I can interpret data that has been collected using a data logger
-I can explain why I might crop an image - I can improve an image by rotating it - I can use photo editing software to crop an image
-I can experiment with different colour effects - I can explain that different colour effects make you think and feel different things - I can explain why I chose certain colour effects
-I can add to the composition of an image by cloning - I can identify how a photo edit can be improved - I can remove parts of an image using cloning
-I can experiment with tools to select and copy part of an image - I can explain why photos might be edited - I can use a range of tools to copy between images
-I can choose suitable images for my project - I can create a project that is a combination of other images - I can describe the image I want to create

-I can combine text and my image to complete the project - I can review images against a given criteria - I can use feedback to guide making changes
-I can list an everyday task as a set of instructions including repetition - I can modify a snippet of code to create a given outcome - I can predict the outcome of a snippet of code
-I can choose when to use a count-controlled and an infinite loop - I can modify loops to produce a given outcome - I can recognise that some programming languages enable more than one process to be run at once
-I can choose which action will be repeated for each object - I can evaluate the effectiveness of the repeated sequences used in my program - I can explain what the outcome of the repeated action should be
-I can explain the effect of my changes - I can identify which parts of a loop can be changed - I can re-use existing code snippets on new sprites
-I can develop my own design explaining what my project will do - I can evaluate the use of repetition in a project - I can select key parts of a given project to use in my own design
-I can build a program that follows my design - I can evaluate the steps I followed when building my project - I can refine the algorithm in my design
-I can describe that a computer system features inputs, processes, and outputs - I can explain that computer systems communicate with other devices - I can explain that systems are built using a number of parts
-I can explain the benefits of a given computer system - I can identify tasks that are managed by computer systems - I can identify the human elements of a computer system
-I can compare results from different search engines - I can make use of a web search to find specific information - I can refine my web search
-I can explain why we need tools to find things online - I can recognise the role of web crawlers in creating an index - I can relate a search term to the search engine’s index

-I can explain that a search engine follows rules to rank results - I can give examples of criteria used by search engines to rank results - I can order a list by rank
-I can describe some of the ways that search results can be influenced - I can explain how search engines make money - I can recognise some of the limitations of search engines
-I can compare features in different videos - I can explain that video is a visual media format - I can identify features of videos
-I can experiment with different camera angles - I can identify and find features on a digital video recording device - I can make use of a microphone
-I can capture video using a range of filming techniques - I can review how effective my video is - I can suggest filming techniques for a given purpose
-I can create and save video content - I can decide which filming techniques I will use - I can outline the scenes of my video
-I can explain how to improve a video by reshooting and editing - I can select the correct tools to make edits to my video - I can store, retrieve, and export my recording to a computer
-I can evaluate my video and share my opinions - I can make edits to my video and improve the final outcome - I can recognise that my choices when making a video will impact on the quality of the final outcome
-I can create a simple circuit and connect it to a microcontroller - I can explain what an infinite loop does - I can program a microcontroller to make an LED switch on
-I can connect more than one output component to a microcontroller - I can design sequences that use count-controlled loops - I can use a count-controlled loop to control outputs
-I can design a conditional loop - I can explain that a condition is either true or false - I can program a microcontroller to respond to an input

-I can explain that a condition being met can start an action - I can identify a condition and an action in my project - I can use selection (an ‘if…then…’ statement) to direct the flow of a program
-I can create a detailed drawing of my project - I can describe what my project will do - I can identify a real-world example of a condition starting an action
-I can test and debug my project - I can use selection to produce an intended outcome - I can write an algorithm that describes what my model will do
-I can create a database using cards - I can explain how information can be recorded - I can order, sort, and group my data cards
-I can choose which field to sort data by to answer a given question - I can explain what a field and a record is in a database - I can navigate a flat-file database to compare different views of information
-I can combine grouping and sorting to answer specific questions - I can explain that data can be grouped using chosen values - I can group information using a database
-I can choose multiple criteria to answer a given question - I can choose which field and value are required to answer a given question - I can outline how ‘AND’ and ‘OR’ can be used to refine data selection
-I can explain the benefits of using a computer to create charts - I can refine a chart by selecting a particular filter - I can select an appropriate chart to visually compare data
-I can ask questions that will need more than one field to answer - I can present my findings to a group - I can refine a search in a real-world context
-I can discuss how vector drawings are different from paper-based drawings - I can experiment with the shape and line tools - I can recognise that vector drawings are made using shapes
-I can explain that each element added to a vector drawing is an object - I can identify the shapes used to make a vector drawing - I can move, resize, and rotate objects I have duplicated

-I can explain how alignment grids and resize handles can be used to improve consistency - I can modify objects to create a new image - I can use the zoom tool to help me add detail to my drawings
-I can change the order of layers in a vector drawing - I can identify that each added object creates a new layer in the drawing - I can use layering to create an image
-I can copy part of a drawing by duplicating several objects - I can recognise when I need to group and ungroup objects - I can reuse a group of objects to further develop my vector drawing
-I can compare vector drawings to freehand paint drawings - I can create a vector drawing for a specific purpose - I can reflect on the skills I have used and why I have used them
-I can identify conditions in a program - I can modify a condition in a program - I can recall how conditions are used in selection
-I can create a program with different outcomes using selection - I can identify the condition and outcomes in an 'if... then… else...' statement - I can use selection in an infinite loop to check a condition
-I can design the flow of a program which contains ‘if… then… else…’ - I can explain that program flow can branch according to a condition - I can show that a condition can direct program flow in one of two ways
-I can identify the outcome of user input in an algorithm - I can outline a given task - I can use a design format to outline my project
-I can implement my algorithm to create the first section of my program - I can share my program with others - I can test my program
-I can extend my program further - I can identify the setup code I need in my program - I can identify ways the program could be improved
-I can describe how computers use addresses to access websites - I can explain that internet devices have addresses - I can recognise that data is transferred using agreed methods

-I can explain that all data transferred over the internet is in packets - I can explain that data is transferred over networks in packets - I can identify and explain the main parts of a data packet
-I can explain that the internet allows different media to be shared - I can recognise how to access shared files stored online - I can send information over the internet in different ways
-I can explain how the internet enables effective collaboration - I can identify different ways of working together online - I can recognise that working together on the internet can be public or private
-I can choose methods of communication to suit particular purposes - I can explain the different ways in which people communicate - I can identify that there are a variety of ways to communicate over the internet
-I can compare different methods of communicating on the internet - I can decide when I should and should not share information online - I can explain that communication on the internet may not be private
-I can discuss the different types of media used on websites - I can explore a website - I know that websites are written in HTML
-I can draw a web page layout that suits my purpose - I can recognise the common features of a web page - I can suggest media to include on my page
-I can describe what is meant by the term ‘fair use’ - I can find copyright-free images - I can say why I should use copyright-free images
-I can add content to my own web page - I can evaluate what my web page looks like on different devices and suggest/make edits - I can preview what my web page looks like
-I can describe why navigation paths are useful - I can explain what a navigation path is - I can make multiple web pages and link them using hyperlinks
-I can create hyperlinks to link to other people's work - I can evaluate the user experience of a website - I can explain the implication of linking to content owned by others

-I can explain that the way a variable changes can be defined
- I can identify examples of information that is variable
- I can identify that variables can hold numbers or letters

-I can explain that a variable has a name and a value
- I can identify a program variable as a placeholder in memory for a single value
- I can recognise that the value of a variable can be changed

-I can decide where in a program to change a variable
- I can make use of an event in a program to set a variable
- I can recognise that the value of a variable can be used by a program

-I can choose the artwork for my project
- I can create algorithms for my project
- I can explain my design choices

-I can choose a name that identifies the role of a variable
- I can create the artwork for my project
- I can test the code that I have written

-I can identify ways that my game could be improved
- I can share my game with others
- I can use variables to extend my game

-I can collect data
- I can enter data into a spreadsheet
- I can suggest how to structure my data

-I can apply an appropriate format to a cell
- I can choose an appropriate format for a cell
- I can explain what an item of data is

-I can construct a formula in a spreadsheet
- I can explain which data types can be used in calculations
- I can identify that changing inputs changes outputs

-I can apply a formula to multiple cells by duplicating it
- I can calculate data using different operations
- I can create a formula which includes a range of cells

-I can apply a formula to calculate the data I need to answer questions
- I can explain why data should be organised
- I can use a spreadsheet to answer questions

-I can produce a chart - I can suggest when to use a table or chart - I can use a chart to show the answer to questions
-I can add 3D shapes to a project - I can move 3D shapes relative to one another - I can view 3D shapes from different perspectives
-I can lift/lower 3D objects - I can recolour a 3D object - I can resize an object in three dimensions
-I can duplicate 3D objects - I can group 3D objects - I can rotate objects in three dimensions
-I can accurately size 3D objects - I can combine a number of 3D objects - I can show that placeholders can create holes in 3D objects
-I can analyse a 3D model - I can choose objects to use in a 3D model - I can combine objects in a design
-I can construct a 3D model based on a design - I can explain how my 3D model could be improved - I can modify my 3D model to improve it
-I can apply my knowledge of programming to a new environment - I can test my program on an emulator - I can transfer my program to a controllable device
-I can determine the flow of a program using selection - I can identify examples of conditions in the real world - I can use a variable in an if, then, else statement to select the flow of a program
-I can experiment with different physical inputs - I can explain that checking a variable doesn't change its value - I can use a condition to change a variable
-I can explain the importance of the order of conditions in else, if statements - I can modify a program to achieve a different outcome - I can use an operand (e.g. <>=) in an if, then statement

-I can decide what variables to include in a project
- I can design the algorithm for my project
- I can design the program flow for my project

-I can create a program based on my design
- I can test my program against my design
- I can use a range of approaches to find and fix bugs