

Year Group	Suggested Order	Unit Name	Lesson	Learning Objectives
3	1	Connecting Computers	1	To explain how digital devices function
3	1	Connecting Computers	2	To identify input and output devices
3	1	Connecting Computers	3	To recognise how digital devices can change the way we work
3	1	Connecting Computers	4	To explain how a computer network can be used to share information
3	1	Connecting Computers	5	To explore how digital devices can be connected
3	1	Connecting Computers	6	To recognise the physical components of a network
3	2	Stop-frame Animation	1	To explain that animation is a sequence of drawings or photographs
3	2	Stop-frame Animation	2	To relate animated movement with a sequence of images
3	2	Stop-frame Animation	3	To plan an animation

3	2	Stop-frame Animation	4	To identify the need to work consistently and carefully
3	2	Stop-frame Animation	5	To review and improve an animation
3	2	Stop-frame Animation	6	To evaluate the impact of adding other media to an animation
3	3	Sequence in music	1	To explore a new programming environment
3	3	Sequence in music	2	I can identify that each sprite is controlled by the commands I choose
3	3	Sequence in music	3	To explain that a program has a start
3	3	Sequence in music	4	To recognise that a sequence of commands can have an order
3	3	Sequence in music	5	To change the appearance of my project
3	3	Sequence in music	6	To create a project from a task description
3	4	Branching databases	1	To create questions with yes/no answers

3	4	Branching databases	2	To identify the object attributes needed to collect relevant data
3	4	Branching databases	3	To create a branching database
3	4	Branching databases	4	To identify objects using a branching database
3	4	Branching databases	5	To explain why it is helpful for a database to be well structured
3	4	Branching databases	6	To compare the information shown in a pictogram with a branching database
3	5	Desktop publishing	1	To recognise how text and images convey information
3	5	Desktop publishing	2	To recognise that text and layout can be edited
3	5	Desktop publishing	3	To choose appropriate page settings
3	5	Desktop publishing	4	To add content to a desktop publishing publication
3	5	Desktop publishing	5	To consider how different layouts can suit different purposes

3	5	Desktop publishing	6	To consider the benefits of desktop publishing
3	6	Events and actions	1	To explain how a sprite moves in an existing project
3	6	Events and actions	2	To create a program to move a sprite in four directions
3	6	Events and actions	3	To adapt a program to a new context
3	6	Events and actions	4	To develop my program by adding features
3	6	Events and actions	5	To identify and fix bugs in a program
3	6	Events and actions	6	To design and create a maze-based challenge
4	1	The Internet	1	To describe how networks physically connect to other networks
4	1	The Internet	2	To recognise how networked devices make up the internet

4	1	The Internet	3	To outline how websites can be shared via the World Wide Web
4	1	The Internet	4	To describe how content can be added and accessed on the World Wide Web
4	1	The Internet	5	To recognise how the content of the WWW is created by people
4	1	The Internet	6	To evaluate the consequences of unreliable content
4	2	Audio editing	1	To identify that sound can be digitally recorded:
4	2	Audio editing	2	To use a digital device to record sound:
4	2	Audio editing	3	To explain that a digital recording is stored as a file:
4	2	Audio editing	4	To explain that audio can be changed through editing:
4	2	Audio editing	5	To show that different types of audio can be combined and played together:

4	2	Audio editing	6	To evaluate editing choices made:
4	3	Repetition in shapes	1	To identify that accuracy in programming is important
4	3	Repetition in shapes	2	To create a program in a text-based language
4	3	Repetition in shapes	3	To explain what 'repeat' means
4	3	Repetition in shapes	4	To modify a count-controlled loop to produce a given outcome
4	3	Repetition in shapes	5	To decompose a program into parts
4	3	Repetition in shapes	6	To create a program that uses count-controlled loops to produce a given outcome
4	4	Data logging	1	To explain that data gathered over time can be used to answer questions
4	4	Data logging	2	To use a digital device to collect data automatically
4	4	Data logging	3	To explain that a data logger collects 'data points' from sensors over time

4	4	Data logging	4	To use data collected over a long duration to find information
4	4	Data logging	5	To identify the data needed to answer questions
4	4	Data logging	6	To use collected data to answer questions
4	5	Photo editing	1	To explain that digital images can be changed
4	5	Photo editing	2	To change the composition of an image
4	5	Photo editing	3	To describe how images can be changed for different uses
4	5	Photo editing	4	To make good choices when selecting different tools
4	5	Photo editing	5	To recognise that not all images are real
4	5	Photo editing	6	To evaluate how changes can improve an image

4	6	Repetition in games	1	To develop the use of count-controlled loops in a different programming environment
4	6	Repetition in games	2	To explain that in programming there are infinite loops and count controlled loops
4	6	Repetition in games	3	To develop a design which includes two or more loops which run at the same time
4	6	Repetition in games	4	To modify an infinite loop in a given program
4	6	Repetition in games	5	To design a project that includes repetition
4	6	Repetition in games	6	To create a project that includes repetition
5	1	Sharing information	1	To explain that computers can be connected together to form systems
5	1	Sharing information	2	To recognise the role of computer systems in our lives

5	1	Sharing information	3	To recognise how information is transferred over the internet
5	1	Sharing information	4	To explain how sharing information online lets people in different places work together
5	1	Sharing information	5	To contribute to a shared project online
5	1	Sharing information	6	To evaluate different ways of working together online
5	2	Video editing	1	To recognise video as moving pictures, which can include audio
5	2	Video editing	2	To identify digital devices that can record video
5	2	Video editing	3	To capture video using a digital device
5	2	Video editing	4	To recognise the features of an effective video

5	2	Video editing	5	To identify that video can be improved through reshooting and editing
5	2	Video editing	6	To consider the impact of the choices made when making and sharing a video
5	3	Selection in physical computing	1	To control a simple circuit connected to a computer
5	3	Selection in physical computing	2	To write a program that includes count-controlled loops
5	3	Selection in physical computing	3	To explain that a loop can stop when a condition is met, eg number of times
5	3	Selection in physical computing	4	To conclude that a loop can be used to repeatedly check whether a condition has been met
5	3	Selection in physical computing	5	To design a physical project that includes selection
5	3	Selection in physical computing	6	To create a controllable system that includes selection
5	4	Flat-file databases	1	To use a form to record information

5	4	Flat-file databases	2	To compare paper and computer-based databases
5	4	Flat-file databases	3	To outline how grouping and then sorting data allows us to answer questions
5	4	Flat-file databases	4	To explain that tools can be used to select specific data
5	4	Flat-file databases	5	To explain that computer programs can be used to compare data visually
5	4	Flat-file databases	6	To apply my knowledge of a database to ask and answer real-world questions
5	5	Vector drawing	1	To identify that drawing tools can be used to produce different outcomes
5	5	Vector drawing	2	To create a vector drawing by combining shapes
5	5	Vector drawing	3	To use tools to achieve a desired effect

5	5	Vector drawing	4	To recognise that vector drawings consist of layers
5	5	Vector drawing	5	To group objects to make them easier to work with
5	5	Vector drawing	6	To evaluate my vector drawing
5	6	Selection in quizzes	1	To explain how selection is used in computer programs
5	6	Selection in quizzes	2	To relate that a conditional statement connects a condition to an outcome
5	6	Selection in quizzes	3	To explain how selection directs the flow of a program
5	6	Selection in quizzes	4	To design a program which uses selection
5	6	Selection in quizzes	5	To create a program which uses selection
5	6	Selection in quizzes	6	To evaluate my program

6	1	Communication	1	To identify how to use a search engine
6	1	Communication	2	To describe how search engines select results
6	1	Communication	3	To explain how search results are ranked
6	1	Communication	4	To recognise why the order of results is important, and to whom
6	1	Communication	5	To recognise how we communicate using technology
6	1	Communication	6	To evaluate different methods of online communication
6	2	Web page creation	1	To review an existing website and consider its structure
6	2	Web page creation	2	To plan the features of a web page
6	2	Web page creation	3	To consider the ownership and use of images (copyright)

6	2	Web page creation	4	To recognise the need to preview pages
6	2	Web page creation	5	To outline the need for a navigation path
6	2	Web page creation	6	To recognise the implications of linking to content owned by other people
6	3	Variables in games	1	To define a 'variable' as something that is changeable
6	3	Variables in games	2	To explain why a variable is used in a program
6	3	Variables in games	3	To choose how to improve a game by using variables
6	3	Variables in games	4	To design a project that builds on a given example
6	3	Variables in games	5	To use my design to create a project
6	3	Variables in games	6	To evaluate my project
6	4	Introduction to spreadsheets	1	To identify questions which can be answered using data

6	4	Introduction to spreadsheets	2	To explain that objects can be described using data
6	4	Introduction to spreadsheets	3	To explain that formula can be used to produce calculated data
6	4	Introduction to spreadsheets	4	To apply formulas to data, including duplicating
6	4	Introduction to spreadsheets	5	To create a spreadsheet to plan an event
6	4	Introduction to spreadsheets	6	To choose suitable ways to present data
6	5	3D Modelling	1	To use a computer to create and manipulate three-dimensional (3D) digital objects
6	5	3D Modelling	2	To compare working digitally with 2D and 3D graphics
6	5	3D Modelling	3	To construct a digital 3D model of a physical object
6	5	3D Modelling	4	To identify that physical objects can be broken down into a collection of 3D shapes
6	5	3D Modelling	5	To design a digital model by combining 3D objects
6	5	3D Modelling	6	To develop and improve a digital 3D model

6	6	Sensing	1	To create a program to run on a controllable device
6	6	Sensing	2	To explain that selection can control the flow of a program
6	6	Sensing	3	To update a variable with a user input
6	6	Sensing	4	To use an conditional statement to compare a variable to a value
6	6	Sensing	5	To design a project that uses inputs and outputs on a controllable device
6	6	Sensing	6	To develop a program to use inputs and outputs on a controllable device

Success Criteria	National Curriculum Links							AL	CM
	2.1	2.2	2.3	2.4	2.5	2.6	2.7		
<ul style="list-style-type: none"> - I can explain that digital devices accept inputs - I can explain that digital devices produce outputs - I can follow a process 									
<ul style="list-style-type: none"> - I can classify input and output devices - I can design a digital device - I can model a simple process 									
<ul style="list-style-type: none"> - 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 									
<ul style="list-style-type: none"> - I can discuss why we need a network switch - I can explain how messages are passed through multiple connections - I can recognise different connections 									
<ul style="list-style-type: none"> - 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 									
<ul style="list-style-type: none"> - I can identify how devices in a network are connected with one another - I can identify networked devices around me - I can identify the benefits of computer networks 									
<ul style="list-style-type: none"> - 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 									
<ul style="list-style-type: none"> - 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 									
<ul style="list-style-type: none"> - 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 									

<ul style="list-style-type: none"> - I can discuss the features of a digital recording I like - I can explain that digital recordings need to be exported to share them - I can suggest improvements to a digital recording 						Blue	Blue	Blue		Purple
<ul style="list-style-type: none"> - 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 	Blue	Blue	Blue				Blue			Purple
<ul style="list-style-type: none"> - 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 	Blue	Blue	Blue				Blue			
<ul style="list-style-type: none"> - 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, eg 'step 3 times' means the same as 'step, step, step' - I can use a count-controlled loop to produce a given outcome 	Blue	Blue	Blue				Blue			Purple
<ul style="list-style-type: none"> - 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 	Blue	Blue	Blue				Blue			
<ul style="list-style-type: none"> - 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 	Blue	Blue	Blue				Blue			Purple
<ul style="list-style-type: none"> - 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 	Blue	Blue	Blue				Blue			
<ul style="list-style-type: none"> - 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 		Blue					Blue			
<ul style="list-style-type: none"> - I can explain that sensors are input devices - I can identify that data from sensors can be recorded - I can use data from a sensor to answer a given question 		Blue					Blue			
<ul style="list-style-type: none"> - I can identify a suitable place to collect data - I can identify the intervals used to collect data - I can talk about the data that I have captured 		Blue					Blue			

<ul style="list-style-type: none"> - 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 	Blue	Blue	Blue	Grey	Grey	Blue	Grey	Grey	Grey
<ul style="list-style-type: none"> - 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 	Blue	Blue	Blue	Grey	Grey	Blue	Grey	Purple	Grey
<ul style="list-style-type: none"> - 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 	Blue	Blue	Blue	Grey	Grey	Blue	Grey	Grey	Grey
<ul style="list-style-type: none"> - 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 	Blue	Blue	Blue	Grey	Grey	Blue	Grey	Grey	Grey
<ul style="list-style-type: none"> - 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 	Blue	Blue	Blue	Grey	Grey	Blue	Grey	Grey	Grey
<ul style="list-style-type: none"> - 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 	Blue	Blue	Blue	Grey	Grey	Blue	Grey	Grey	Grey
<ul style="list-style-type: none"> - 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 	Blue	Blue	White	Blue	White	Blue	Blue	White	White
<ul style="list-style-type: none"> - 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 	Blue	Blue	White	Blue	White	Blue	Blue	White	White

<ul style="list-style-type: none"> - I can explain that data is transferred over networks in packets - I can explain that networked digital devices have unique addresses - I can recognise that data is transferred using agreed methods 	Blue	Blue	Light Grey	Blue	Light Grey	Blue	Blue	Light Grey	Light Grey	
<ul style="list-style-type: none"> - I can explain that the internet allows different media to be shared - I can recognise that connected digital devices can allow us to access shared files stored online - I can send information over the internet in different ways 	Blue	Blue	Light Grey	Blue	Light Grey	Blue	Blue	Light Grey	Light Grey	
<ul style="list-style-type: none"> - I can compare working online with working offline - I can make thoughtful suggestions on my group's work - I can suggest strategies to ensure successful group work 	Blue	Blue	Light Grey	Blue	Light Grey	Blue	Blue	Light Grey	Light Grey	
<ul style="list-style-type: none"> - 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 	Blue	Blue	Light Grey	Blue	Light Grey	Blue	Blue	Light Grey	Light Grey	
<ul style="list-style-type: none"> - I can explain that a video can include both visual and audio media - I can explain the benefits of adding audio to a video - I can plan a video project using a storyboard 	Light Grey	Light Grey	Light Grey	Light Grey	Light Grey	Blue	Blue	Blue	Light Grey	Purple
<ul style="list-style-type: none"> - I can choose the most suitable digital device for recording my project - I can identify and name digital devices that can record video and sound - I can locate and identify the working features of a digital device that can record video 	Light Grey	Light Grey	Light Grey	Light Grey	Light Grey	Blue	Blue	Blue	Light Grey	Purple
<ul style="list-style-type: none"> - I can demonstrate suitable methods of using a digital device to capture my video - I can demonstrate the safe use and handling of devices - I can select a suitable device and software to capture my video 	Light Grey	Light Grey	Light Grey	Light Grey	Light Grey	Blue	Blue	Blue	Light Grey	Purple
<ul style="list-style-type: none"> - I can explain why lighting and angle are important in creating an effective video - I can list some of the features of an effective video - I can record a video that demonstrates some of the features of an effective video 	Light Grey	Light Grey	Light Grey	Light Grey	Light Grey	Blue	Blue	Blue	Light Grey	Purple

<ul style="list-style-type: none"> - I can compare results from different search engines - I can complete a web search to find specific information - I can refine my search 	Blue	Light Grey	Light Grey	Blue	Blue	Blue	Blue	Light Grey	Light Grey
<ul style="list-style-type: none"> - 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 	Blue	Light Grey	Light Grey	Blue	Blue	Blue	Blue	Light Grey	Light Grey
<ul style="list-style-type: none"> - I can explain that a search engine follows rules to rank relevant pages - I can explain that search results are ordered - I can suggest some of the criteria that a search engine checks to decide on the order of results 	Blue	Light Grey	Light Grey	Blue	Blue	Blue	Blue	Light Grey	Light Grey
<ul style="list-style-type: none"> - 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 	Blue	Light Grey	Light Grey	Blue	Blue	Blue	Blue	Light Grey	Light Grey
<ul style="list-style-type: none"> - 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 of communicating over the internet 	Blue	Light Grey	Light Grey	Blue	Blue	Blue	Blue	Light Grey	Light Grey
<ul style="list-style-type: none"> - I can compare different methods of communicating on the internet - I can decide when I should and should not share - I can explain that communication on the internet may not be private 	Blue	Light Grey	Light Grey	Blue	Blue	Blue	Blue	Light Grey	Light Grey
<ul style="list-style-type: none"> - I can discuss the different types of media used on websites - I can explore a website - I know that websites are written in HTML 	Light Grey	Light Grey	Light Grey	Light Grey	Blue	Blue	Blue	Light Grey	Purple
<ul style="list-style-type: none"> - 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 	Light Grey	Light Grey	Light Grey	Light Grey	Blue	Blue	Blue	Light Grey	Purple
<ul style="list-style-type: none"> - 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 	Light Grey	Light Grey	Light Grey	Light Grey	Blue	Blue	Blue	Light Grey	Purple

<ul style="list-style-type: none"> - 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 									
<ul style="list-style-type: none"> - 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 									
<ul style="list-style-type: none"> - I can experiment with different physical inputs - I can explain that if you read a variable, the value remains - I can use a condition to change a variable 									
<ul style="list-style-type: none"> - 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 									
<ul style="list-style-type: none"> - 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 									
<ul style="list-style-type: none"> - 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 									

