1	Programming B – Repetition in games	–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 - I can modify a snippet of code to create a given outcome - I can predict the outcome of a snippet of code
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 - 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
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 –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
4		–To modify an infinite loop in a given program	–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
5		–To design a project that includes repetition	–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
6		–To create a project that includes repetition	–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

Year FIVE

Computing systems and networks – Systems and searching

Lesson	Title	Learning Intention	Success Criteria
1	Computing systems and networks – Systems and searching	–To explain that computers can be connected together to form systems	–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
2		–To recognise the role of computer systems in our lives	–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
3		–To experiment with search engines	–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
4		–To describe how search engines select results	–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

Lesson	Title	Learning Intention	Success Criteria
5		–To explain how search results are ranked	–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
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 - I can explain how search engines make money - I can recognise some of the limitations of search engines

Creating media – Video production

Lesson	Title	Learning Intention	Success Criteria
1	Creating media – Video production	–To explain what makes a video effective	–I can compare features in different videos - I can explain that video is a visual media format - I can identify features of videos
2		–To identify digital devices that can record video	–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
3		–To capture video using a range of techniques	–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
4		–To create a storyboard	–I can create and save video content - I can decide which filming techniques I will use - I can outline the scenes of my video
5		–To identify that video can be improved through reshooting and editing	–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
6		–To consider the impact of the choices made when making and sharing a video	–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

Programming A – Selection in physical computing

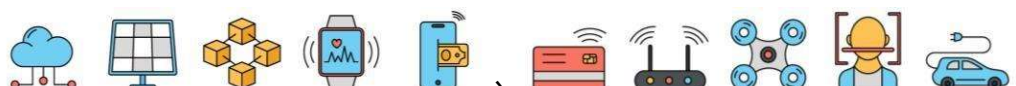| Lesson	Title	Learning Intention	Success Criteria
1	Programming A – Repetition in shapes	–To control a simple circuit connected to a computer	–I can create a simple circuit and connect it to a microcontroller – I can explain what an infinite loop does – I can program a microcontroller to make an LED switch on
2		–To write a program that includes count controlled loops	–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
3		–To explain that a loop can stop when a condition is met	–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

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 – 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
5		–To design a physical project that includes selection	–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
6		–To create a program that controls a physical computing project	–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

Data and information – Flat-file databases

Lesson	Title	Learning Intention	Success Criteria
1	Data and information – Flat-file databases	–To use a form to record information	–I can create a database using cards - I can explain how information can be recorded - I can order, sort, and group my data cards
2		–To compare paper and computer-based databases	–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
3		–To outline how you can answer questions by grouping and then sorting data	–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
4		–To explain that tools can be used to select specific data	–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
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 - I can refine a chart by selecting a particular filter - I can select an appropriate chart to visually compare data
6		–To use a real-world database to answer questions	–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

Creating media – Introduction to vector graphics

Lesson	Title	Learning Intention	Success Criteria
1	Creating media – Introduction to vector graphics	–To identify that drawing tools can be used to produce different outcomes	–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
2		–To create a vector drawing by combining 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

3		–To use tools to achieve a desired effect	–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
4		–To recognise that vector drawings consist of layers	–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
5		–To group objects to make them easier to work with	–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
6		–To apply what I have learned about vector drawings	–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

Programming B – Selection in quizzes

Lesson	Title	Learning Intention	Success Criteria
1	Programming B – Selection in quizzes	–To explain how selection is used in computer programs	–I can identify conditions in a program – I can modify a condition in a program – I can recall how conditions are used in selection
2		–To relate that a conditional statement connects a condition to an outcome	–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
3		–To explain how selection directs the flow of a program	–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
4		–To design a program which uses selection	–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
5		–To create a program which uses selection	–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
6		–To evaluate 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

SIX

Year

Computing systems and networks – Communication and collaboration