

| Year Group | Unit Name   | Lesson | Learning Objectives   | Success Criteria   | Education for a Connected World                            |
|------------|---|--------|---|--|--|
| 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  |  |
| 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   |  |
| 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  |  |
| 3          | Creating media - Stop-frame animation                 | 1      | -To explain that animation is a sequence of drawings or photographs | -I can create an effective flip book—style animation<br>- I can draw a sequence of pictures<br>- I can explain how an animation/flip book works  | - Copyright and ownership<br>- Managing online information |
| 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  | - Copyright and ownership<br>- Managing online information |
| 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  | - Copyright and ownership<br>- Managing online information |
| 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   | - Copyright and ownership<br>- Managing online information |

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| 3          | Creating media - Stop-frame animation      | 5      | -To review and improve an animation                                | <ul style="list-style-type: none"> <li>-I can evaluate another learner's animation</li> <li>- I can explain ways to make my animation better</li> <li>- I can improve my animation based on feedback</li> </ul>  | <ul style="list-style-type: none"> <li>- Copyright and ownership</li> <li>- Managing online information</li> </ul> |
| 3          | Creating media - Stop-frame animation      | 6      | -To evaluate the impact of adding other media to an animation      | <ul style="list-style-type: none"> <li>-I can add other media to my animation</li> <li>- I can evaluate my final film</li> <li>- I can explain why I added other media to my animation</li> </ul>  | <ul style="list-style-type: none"> <li>- Copyright and ownership</li> <li>- Managing online information</li> </ul> |
| 3          | Programming A - Sequencing sounds          | 1      | -To explore a new programming environment                          | <ul style="list-style-type: none"> <li>-I can explain that objects in Scratch have attributes (linked to)</li> <li>- I can identify the objects in a Scratch project (sprites, backdrops)</li> <li>- I can recognise that commands in Scratch are represented as blocks</li> </ul> |  |
| 3          | Programming A - Sequencing sounds          | 2      | -To identify that commands have an outcome                         | <ul style="list-style-type: none"> <li>-I can choose a word which describes an on-screen action for my plan</li> <li>- I can create a program following a design</li> <li>- I can identify that each sprite is controlled by the commands I choose</li> </ul>                      |  |
| 3          | Programming A - Sequencing sounds          | 3      | -To explain that a program has a start                             | <ul style="list-style-type: none"> <li>-I can create a sequence of connected commands</li> <li>- I can explain that the objects in my project will respond exactly to the code</li> <li>- I can start a program in different ways</li> </ul>                                       |  |
| 3          | Programming A - Sequencing sounds          | 4      | -To recognise that a sequence of commands can have an order        | <ul style="list-style-type: none"> <li>-I can combine sound commands</li> <li>- I can explain what a sequence is</li> <li>- I can order notes into a sequence</li> </ul>   |  |
| 3          | Programming A - Sequencing sounds          | 5      | -To change the appearance of my project                            | <ul style="list-style-type: none"> <li>-I can build a sequence of commands</li> <li>- I can decide the actions for each sprite in a program</li> <li>- I can make design choices for my artwork</li> </ul>   |  |
| 3          | Programming A - Sequencing sounds          | 6      | -To create a project from a task description                       | <ul style="list-style-type: none"> <li>-I can identify and name the objects I will need for a project</li> <li>- I can implement my algorithm as code</li> <li>- I can relate a task description to a design</li> </ul>  |  |
| 3          | Data and information – Branching databases | 1      | -To create questions with yes/no answers                           | <ul style="list-style-type: none"> <li>-I can create two groups of objects separated by one attribute</li> <li>- I can investigate questions with yes/no answers</li> <li>- I can make up a yes/no question about a collection of objects</li> </ul>                               |  |
| 3          | Data and information – Branching databases | 2      | -To identify the attributes needed to collect data about an object | <ul style="list-style-type: none"> <li>-I can arrange objects into a tree structure</li> <li>- I can create a group of objects within an existing group</li> <li>- I can select an attribute to separate objects into groups</li> </ul>  |  |

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| 3          | Data and information – Branching databases | 3      | -To create a branching database                                    | <ul style="list-style-type: none"> <li>-I can group objects using my own yes/no questions</li> <li>- I can select objects to arrange in a branching database</li> <li>- I can test my branching database to see if it works</li> </ul>   |  |
| 3          | Data and information – Branching databases | 4      | -To explain why it is helpful for a database to be well structured | <ul style="list-style-type: none"> <li>-I can compare two branching database structures</li> <li>- I can create yes/no questions using given attributes</li> <li>- I can explain that questions need to be ordered carefully to split objects into similarly sized groups</li> </ul> |  |
| 3          | Data and information – Branching databases | 5      | -To plan the structure of a branching database                     | <ul style="list-style-type: none"> <li>-I can create a physical version of a branching database</li> <li>- I can create questions that will enable objects to be uniquely identified</li> <li>- I can independently create questions to use in a branching database</li> </ul>       |  |
| 3          | Data and information – Branching databases | 6      | -To independently create an identification tool                    | <ul style="list-style-type: none"> <li>-I can create a branching database that reflects my plan</li> <li>- I can suggest real-world uses for branching databases</li> <li>- I can work with a partner to test my identification tool</li> </ul>                                      |  |
| 3          | Creating media – Desktop publishing        | 1      | -To recognise how text and images convey information               | <ul style="list-style-type: none"> <li>-I can explain the difference between text and images</li> <li>- I can identify the advantages and disadvantages of using text and images</li> <li>- I can recognise that text and images can communicate messages clearly</li> </ul>         | <ul style="list-style-type: none"> <li>- Copyright and ownership</li> <li>- Managing online information</li> </ul> |
| 3          | Creating media – Desktop publishing        | 2      | -To recognise that text and layout can be edited                   | <ul style="list-style-type: none"> <li>-I can change font style, size, and colours for a given purpose</li> <li>- I can edit text</li> <li>- I can explain that text can be changed to communicate more clearly</li> </ul>   | <ul style="list-style-type: none"> <li>- Copyright and ownership</li> <li>- Managing online information</li> </ul> |
| 3          | Creating media – Desktop publishing        | 3      | -To choose appropriate page settings                               | <ul style="list-style-type: none"> <li>-I can create a template for a particular purpose</li> <li>- I can define the term 'page orientation'</li> <li>- I can recognise placeholders and say why they are important</li> </ul>   | <ul style="list-style-type: none"> <li>- Copyright and ownership</li> <li>- Managing online information</li> </ul> |
| 3          | Creating media – Desktop publishing        | 4      | -To add content to a desktop publishing publication                | <ul style="list-style-type: none"> <li>-I can choose the best locations for my content</li> <li>- I can make changes to content after I've added it</li> <li>- I can paste text and images to create a magazine cover</li> </ul>   | <ul style="list-style-type: none"> <li>- Copyright and ownership</li> <li>- Managing online information</li> </ul> |
| 3          | Creating media – Desktop publishing        | 5      | -To consider how different layouts can suit different purposes     | <ul style="list-style-type: none"> <li>-I can choose a suitable layout for a given purpose</li> <li>- I can identify different layouts</li> <li>- I can match a layout to a purpose</li> </ul>   | <ul style="list-style-type: none"> <li>- Copyright and ownership</li> <li>- Managing online information</li> </ul> |
| 3          | Creating media – Desktop publishing        | 6      | -To consider the benefits of desktop publishing                    | <ul style="list-style-type: none"> <li>-I can compare work made on desktop publishing to work created by hand</li> <li>- I can identify the uses of desktop publishing in the real world</li> <li>- I can say why desktop publishing might be helpful</li> </ul>                     | <ul style="list-style-type: none"> <li>- Copyright and ownership</li> <li>- Managing online information</li> </ul> |

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| 3          | Programming B - Events and actions in programs | 1      | -To explain how a sprite moves in an existing project                          | <ul style="list-style-type: none"> <li>-I can choose which keys to use for actions and explain my choices</li> <li>- I can explain the relationship between an event and an action</li> <li>- I can identify a way to improve a program</li> </ul>                      |                                 |
| 3          | Programming B - Events and actions in programs | 2      | -To create a program to move a sprite in four directions                       | <ul style="list-style-type: none"> <li>-I can choose a character for my project</li> <li>- I can choose a suitable size for a character in a maze</li> <li>- I can program movement</li> </ul>  |                                 |
| 3          | Programming B - Events and actions in programs | 3      | -To adapt a program to a new context   | <ul style="list-style-type: none"> <li>-I can choose blocks to set up my program</li> <li>- I can consider the real world when making design choices</li> <li>- I can use a programming extension</li> </ul>  |                                 |
| 3          | Programming B - Events and actions in programs | 4      | -To develop my program by adding features                                      | <ul style="list-style-type: none"> <li>-I can build more sequences of commands to make my design work</li> <li>- I can choose suitable keys to turn on additional features</li> <li>- I can identify additional features (from a given set of blocks)</li> </ul>        |                                 |
| 3          | Programming B - Events and actions in programs | 5      | -To identify and fix bugs in a program   | <ul style="list-style-type: none"> <li>-I can match a piece of code to an outcome</li> <li>- I can modify a program using a design</li> <li>- I can test a program against a given design</li> </ul>  |                                 |
| 3          | Programming B - Events and actions in programs | 6      | -To design and create a maze-based challenge                                   | <ul style="list-style-type: none"> <li>-I can evaluate my project</li> <li>- I can implement my design</li> <li>- I can make design choices and justify them</li> </ul>   |                                 |
| 4          | Computing systems and networks – The Internet  | 1      | -To describe how networks physically connect to other networks                 | <ul style="list-style-type: none"> <li>-I can demonstrate how information is shared across the internet</li> <li>- I can describe the internet as a network of networks</li> <li>- I can discuss why a network needs protecting</li> </ul>                              |                                 |
| 4          | Computing systems and networks – The Internet  | 2      | -To recognise how networked devices make up the internet                       | <ul style="list-style-type: none"> <li>-I can describe networked devices and how they connect</li> <li>- I can explain that the internet is used to provide many services</li> <li>- I can recognise that the World Wide Web contains websites and web pages</li> </ul> |                                 |
| 4          | Computing systems and networks – The Internet  | 3      | -To outline how websites can be shared via the World Wide Web (WWW)            | <ul style="list-style-type: none"> <li>-I can describe how to access websites on the WWW</li> <li>- I can describe where websites are stored when uploaded to the WWW</li> <li>- I can explain the types of media that can be shared on the WWW</li> </ul>              |                                 |
| 4          | Computing systems and networks – The Internet  | 4      | -To describe how content can be added and accessed on the World Wide Web (WWW) | <ul style="list-style-type: none"> <li>-I can explain that internet services can be used to create content online</li> <li>- I can explain what media can be found on websites</li> <li>- I can recognise that I can add content to the WWW</li> </ul>                  |                                 |

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| 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   |                                 |
| 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                                  | - Copyright and ownership       |
| 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   | - Copyright and ownership       |
| 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   | - Copyright and ownership       |
| 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   | - Copyright and ownership       |
| 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  | - Copyright and ownership       |
| 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   | - Copyright and ownership       |
| 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  |                                 |
| 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  |                                 |

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| 4          | Programming A – Repetition in shapes | 3      | -To explain what 'repeat' means  | <ul style="list-style-type: none"> <li>- I can identify everyday tasks that include repetition as part of a sequence, eg brushing teeth, dance moves</li> <li>- I can identify patterns in a sequence</li> <li>- I can use a count-controlled loop to produce a given outcome</li> </ul> |                                 |
| 4          | Programming A – Repetition in shapes | 4      | -To modify a count-controlled loop to produce a given outcome                    | <ul style="list-style-type: none"> <li>- I can choose which values to change in a loop</li> <li>- I can identify the effect of changing the number of times a task is repeated</li> <li>- I can predict the outcome of a program containing a count-controlled loop</li> </ul>           |                                 |
| 4          | Programming A – Repetition in shapes | 5      | -To decompose a task into small steps  | <ul style="list-style-type: none"> <li>- I can explain that a computer can repeatedly call a procedure</li> <li>- I can identify 'chunks' of actions in the real world</li> <li>- I can use a procedure in a program</li> </ul>  |                                 |
| 4          | Programming A – Repetition in shapes | 6      | -To create a program that uses count-controlled loops to produce a given outcome | <ul style="list-style-type: none"> <li>- I can design a program that includes count-controlled loops</li> <li>- I can develop my program by debugging it</li> <li>- I can make use of my design to write a program</li> </ul>  |                                 |
| 4          | Data and information – Data logging  | 1      | -To explain that data gathered over time can be used to answer questions         | <ul style="list-style-type: none"> <li>- I can choose a data set to answer a given question</li> <li>- I can identify data that can be gathered over time</li> <li>- I can suggest questions that can be answered using a given data set</li> </ul>                                      |                                 |
| 4          | Data and information – Data logging  | 2      | -To use a digital device to collect data automatically                           | <ul style="list-style-type: none"> <li>- I can explain what data can be collected using sensors</li> <li>- I can identify that data from sensors can be recorded</li> <li>- I can use data from a sensor to answer a given question</li> </ul>   |                                 |
| 4          | Data and information – Data logging  | 3      | -To explain that a data logger collects 'data points' from sensors over time     | <ul style="list-style-type: none"> <li>- I can identify the intervals used to collect data</li> <li>- I can recognise that a data logger collects data at given points</li> <li>- I can talk about the data that I have captured</li> </ul>  |                                 |
| 4          | Data and information – Data logging  | 4      | -To recognise how a computer can help us analyse data                            | <ul style="list-style-type: none"> <li>- I can explain that there are different ways to view data</li> <li>- I can sort data to find information</li> <li>- I can view data at different levels of detail</li> </ul>   |                                 |
| 4          | Data and information – Data logging  | 5      | -To identify the data needed to answer questions                                 | <ul style="list-style-type: none"> <li>- I can plan how to collect data using a data logger</li> <li>- I can propose a question that can be answered using logged data</li> <li>- I can use a data logger to collect data</li> </ul>   |                                 |
| 4          | Data and information – Data logging  | 6      | -To use data from sensors to answer questions                                    | <ul style="list-style-type: none"> <li>- I can draw conclusions from the data that I have collected</li> <li>- I can explain the benefits of using a data logger</li> <li>- I can interpret data that has been collected using a data logger</li> </ul>                                  |                                 |

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| 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                             |                                 |
| 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      |                                 |
| 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   |                                 |
| 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 | - Copyright and ownership       |
| 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  | - Copyright and ownership       |
| 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  | - Copyright and ownership       |
| 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                                   | - Copyright and ownership       |

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| 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   | - Copyright and ownership       |
| 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                                | - Copyright and ownership       |
| 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  |                                 |
| 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  |                                 |
| 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      |                                 |
| 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   |                                 |
| 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 |                                 |



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| 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  |                                 |
| 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                        | - Copyright and ownership       |
| 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                    | - Copyright and ownership       |
| 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            | - Copyright and ownership       |
| 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  | - Copyright and ownership       |
| 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                   | - Copyright and ownership       |
| 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                             | - Copyright and ownership       |

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|------------|--|--------|---|---|--|
| 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   |  |
| 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        |  |
| 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 |  |
| 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                                       | - Managing online information<br>- Online reputation |
| 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                   | - Managing online information<br>- Online reputation |
| 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                              | - Managing online information<br>- Online reputation |
| 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               | - Managing online information<br>- Online reputation |

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| 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 | - Managing online information<br>- Online reputation |
| 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         | - Managing online information<br>- Online reputation |
| 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                                  |  |
| 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                |  |
| 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   |  |
| 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   |  |

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| 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                                   | - Privacy and security          |
| 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  | - Privacy and security          |
| 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   | - Privacy and security          |
| 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                                | - Privacy and security          |
| 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   | - Privacy and security          |
| 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                              | - Privacy and security          |

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| 6          | Programming B - Sensing movement | 1      | -To create a program to run on a controllable device                       | <ul style="list-style-type: none"> <li>-I can apply my knowledge of programming to a new environment</li> <li>- I can test my program on an emulator</li> <li>- I can transfer my program to a controllable device</li> </ul>  |                                 |
| 6          | Programming B - Sensing movement | 2      | -To explain that selection can control the flow of a program               | <ul style="list-style-type: none"> <li>-I can determine the flow of a program using selection</li> <li>- I can identify examples of conditions in the real world</li> <li>- I can use a variable in an if, then, else statement to select the flow of a program</li> </ul>   |                                 |
| 6          | Programming B - Sensing movement | 3      | -To update a variable with a user input                                    | <ul style="list-style-type: none"> <li>-I can experiment with different physical inputs</li> <li>- I can explain that checking a variable doesn't change its value</li> <li>- I can use a condition to change a variable</li> </ul>  |                                 |
| 6          | Programming B - Sensing movement | 4      | -To use a conditional statement to compare a variable to a value           | <ul style="list-style-type: none"> <li>-I can explain the importance of the order of conditions in else, if statements</li> <li>- I can modify a program to achieve a different outcome</li> <li>- I can use an operand (e.g. &lt;=&gt;) in an if, then statement</li> </ul> |                                 |
| 6          | Programming B - Sensing movement | 5      | -To design a project that uses inputs and outputs on a controllable device | <ul style="list-style-type: none"> <li>-I can decide what variables to include in a project</li> <li>- I can design the algorithm for my project</li> <li>- I can design the program flow for my project</li> </ul>  |                                 |
| 6          | Programming B - Sensing movement | 6      | -To develop a program to use inputs and outputs on a controllable device   | <ul style="list-style-type: none"> <li>-I can create a program based on my design</li> <li>- I can test my program against my design</li> <li>- I can use a range of approaches to find and fix bugs</li> </ul>  |                                 |