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| **Year 4 Overview** |
| **Unit Name** | **Lesson** | **Learning Objectives** | **Success Criteria** | **Cross Curricular Links** |
| **Autumn 1** |
| Computing systems and networks – The Internet | 1 | Can I describe how networks physically connect to other networks? |  -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 |   |
| Computing systems and networks – The Internet | 2 | Can I recognise how networked devices make up the internet? |  -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 |   |
| Computing systems and networks – The Internet | 3 | Can I outline how websites can be shared via the World Wide Web (WWW)? |  -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 |   |
| Computing systems and networks – The Internet | 4 | Can I describe how content can be added and accessed on the World Wide Web (WWW)? |  -I can explain that internet services can be used to create content online- I can explain what media can be found on websites- I can recognise that I can add content to the WWW |   |
| Computing systems and networks – The Internet | 5 | Can I recognise how the content of the WWW is created by people? |  -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  |   |
| Computing systems and networks – The Internet | 6 | Can I evaluate the consequences of unreliable content? |  -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 |   |
| **Autumn 2** |
| Creating media - Audio production | 1 | Can I identify that sound can be recorded? |  -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 |   |
| Creating media - Audio production | 2 | Can I explain that audio recordings can be edited? |  -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 |   |
| Creating media - Audio production | 3 | Can I recognise the different parts of creating a podcast project? |  -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 |   |
| Creating media - Audio production | 4 | Can I apply audio editing skills independently? |  -I can improve my voice recordings- I can record content following my plan- I can review the quality of my recordings |   |
| Creating media - Audio production | 5 | Can I combine audio to enhance my podcast project? |  -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 |   |
| Creating media - Audio production | 6 | Can I evaluate the effective use of audio? |  -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 |   |
| **Spring 1** |
| Programming A – Repetition in shapes | 1 | Can I identify that accuracy in programming is important? |  -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 |   |
| Programming A – Repetition in shapes | 2 | Can I create a program in a text-based language? |  -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 |   |
| Programming A – Repetition in shapes | 3 | Can I explain what ‘repeat’ means? |  -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 |   |
| Programming A – Repetition in shapes | 4 | Can I modify 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 |   |
| Programming A – Repetition in shapes | 5 | Can I decompose a task into small steps? |  -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 |   |
| Programming A – Repetition in shapes | 6 | Can I create a program that uses count-controlled loops to produce a given outcome? |  -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 |   |
| **Spring 2** |
| Data and information – Data logging | 1 | Can I explain that data gathered over time can be used to answer questions? |  -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 |   |
| Data and information – Data logging | 2 | Can I use a digital device to collect data automatically? |  -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 |   |
| Data and information – Data logging | 3 | Can I explain that a data logger collects ‘data points’ from sensors over time? |  -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 |   |
| Data and information – Data logging | 4 | Can I recognise how a computer can help us analyse data? |  -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 |   |
| Data and information – Data logging | 5 | Can I identify the data needed to answer questions? |  -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 |   |
| Data and information – Data logging | 6 |  Can I use data from sensors to answer questions? |  -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 |   |
| **Summer 1** |
| Creating media – Photo editing | 1 | Can I explain that the composition of digital images can be changed? |  -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 |   |
| Creating media – Photo editing | 2 | Can I explain that colours can be changed in digital images? |  -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 |   |
| Creating media – Photo editing | 3 | Can I explain how cloning can be used in photo editing? |  -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 |   |
| Creating media – Photo editing | 4 | Can I explain that images can be combined? |  -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 |   |
| Creating media – Photo editing | 5 | Can I combine images for a purpose? |  -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 |   |
| Creating media – Photo editing | 6 | Can I evaluate how changes can improve an image? |  -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 |   |
| **Summer 2** |
| Programming B – Repetition in games | 1 | Can I 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 |   |
| Programming B – Repetition in games | 2 | Can I 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 |   |
| Programming B – Repetition in games | 3 | Can I 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 |   |
| Programming B – Repetition in games | 4 | Can I 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 |   |
| Programming B – Repetition in games | 5 | Can I 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 |   |
| Programming B – Repetition in games | 6 | Can I 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 |   |