



# Year 4 - Year Group Overview Computing

| Year 4                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
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| <p><b>Online Safety</b><br/>(Using Project Evolve)</p> | <p><b>Self-Image and Identity</b><br/>           I can explain how my online identify can be different to my offline identify.<br/>           I can describe positive ways for someone to interact with others online and understand how this will positively impact on how others perceive them.<br/>           I can explain that others online can pretend to be someone else, including my friends, and can suggest reasons why they might do this.</p> <p><b>Online Relationships</b><br/>           I can describe strategies for safe and fun experiences in a range of online social environments (e.g. live streaming, gaming platforms)<br/>           I can give examples of how to be respectful to others online and describe how to recognise healthy and unhealthy online behaviours.<br/>           I can explain how content shared online may feel unimportant to one person but may be important to other people's thoughts, feelings an beliefs.</p> <p><b>Online Reputation</b><br/>           I can describe how to find out information about others by searching online.<br/>           I can explain way that some of the information about anyone online could have been created, copied or shared by others.</p> <p><b>Online Bullying</b><br/>           I can recognise when someone is upset, hurt or angry online.<br/>           I can describe ways people can be bullied through a range of media (e.g. image, video, text, chat).<br/>           I can explain why people need to think carefully about how content they post might affect others, their feelings and how it may affect how others feel about them (their reputation).</p> <p><b>Managing Online Information</b><br/>           I can analyse information to make a judgement about probable accuracy and I understand why it is important to make my own decisions regarding content and that my decisions are respected by others.<br/>           I can describe how to search for information within a wide group of technologies and make a judgement about the probable accuracy (e.g. social media, image sites, video sites).<br/>           I can describe some of the methods used to encourage people to buy things online (e.g. advertising offers; in-app purchases, pop-ups) and can recognise some of these when they appear online.<br/>           I can explain why lots of people sharing the same opinions or beliefs online do not make those opinions or beliefs true.<br/>           I can explain that technology can be designed to act like or impersonate living things (e.g. bots) and describe what the benefits and the risks might be.</p> |

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|                                                  |              | <p>I can explain what is meant by fake news e.g why some people will create stories or alter photographs and put them online to pretend something is true when it isn't.</p> <p><b>Health, Well-being and Lifestyle</b></p> <p>I can explain how using technology can be a distraction from other things, in both a positive and negative way.</p> <p>I can identify times or situations when someone may need to limit the amount of time they use technology e.g. I can suggest strategies to help with limiting this time.</p> <p><b>Privacy and Security</b></p> <p>I can describe strategies for keeping personal information private, depending on context.</p> <p>I can explain that internet use is never private and is monitored, e.g. adult supervision.</p> <p>I can describe how some online services may seek consent to store information about me; I know how to respond appropriately and who I can ask if I am unsure.</p> <p>I know what the digital age of consent is and the impact this has on online services when asking for consent.</p> <p><b>Copyright and Ownership</b></p> <p>When searching on the internet for content to use, I can explain why I need to consider who owns it and whether I have the right to reuse it.</p> <p>I can give some simple examples of content which I must not use without permission from the owner, e.g. video, music, images.</p> |
| Year 4                                           |              | <div>Declarative</div> <div>Procedural</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Autumn 1<br>Computing<br>Systems and<br>Networks | The Internet | <p>To describe how networks connect to other networks</p> <p>To outline how information can be shared via the World Wide Web</p> <p>To recognise that the World Wide Web is part of the internet</p> <p>To explain that the global interconnection of networks is the internet</p> <p>To recognise the need for security on the internet</p> <p>To Describe how to access the World Wide Web</p> <p>To describe the types of content/media that can be added, created, and shared on the World Wide Web</p> <p>To explain how the content of the World Wide Web is created, owned, and shared by people</p> <p>To explain that the internet enables us to view the World Wide Web</p> <p>To explain that the World Wide Web comprises of websites and web pages</p> <p>To describe the current limitations of the World Wide Web</p> <p>To evaluate the reliability of content and the consequences of unreliable content</p> <p>To explain the benefits of the World Wide Web</p>                                                                                                                                                                                                                                                                                                                                                                                                                |

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| Autumn 2<br>Creating Media       | Audio production     | <p>To identify that sound can be recorded</p> <p>To identify that an input device is needed to record sound</p> <p>To identify that output devices are needed to play audio</p> <p>To recognise that recorded audio can be stored on a computer</p> <p>To recognise that audio can be edited</p> <p>To recognise that sound can be represented visually as a waveform</p> <p>To recognise that audio can be layered so that multiple sounds can be played at the same time</p> <p>To consider the results of editing choices made</p>                                                                                                                                                                                                                                                                                                                                                                            | <p>To record sound using a computer</p> <p>To play recorded audio</p> <p>To import audio into a project</p> <p>To delete a section of audio</p> <p>To change the volume of tracks in a project</p>                                                                                                                                                                                                                                                                   |
| Spring 1<br>Programming A        | Repetition in shapes | <p>To relate what 'repeat' means</p> <p>To identify everyday tasks that include repetition as part of a sequence, e.g. brushing teeth, dance moves</p> <p>To explain that we can use a loop command in a program to repeat instructions</p> <p>To identify a loop within a program</p> <p>To identify patterns in a sequence</p> <p>To explain that in programming there are indefinite loops and count-controlled loops</p> <p>To explain that an indefinite loop will run until the program is stopped</p> <p>To explain that you can program a loop to stop after a specific number of times</p> <p>To identify patterns in a sequence, eg 'step 3 times' means the same as 'step, step, step'</p> <p>To justify when to use a loop and when not to</p> <p>To explain the importance of instruction order in a loop</p> <p>To recognise that not all tools enable more than one process to be run at once</p> | <p>To list an everyday task as a set of instructions including repetition</p> <p>To use an indefinite loop to produce a given outcome</p> <p>To use a count-controlled loop to produce a given outcome</p> <p>To plan a program that includes appropriate loops to produce a given outcome</p> <p>To recognise tools that enable more than one process to be run at the same time (concurrency)</p> <p>To create two or more sequences that run at the same time</p> |
| Spring 2<br>Data and Information | Data logging         | <p>To suggest questions that can be answered using a table of data</p> <p>To identify data that can be logged over time</p> <p>To identify that sensors are input devices</p> <p>To recognise that a sensor can be used as an input device for data collection</p> <p>To explain that a data logger captures 'data points' from sensors over time</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <p>To use a digital device to collect data automatically</p> <p>To choose how often to automatically collect data samples</p> <p>To use a set of logged data to find information</p> <p>To use a computer program to sort data by one attribute</p> <p>To export information in different formats</p>                                                                                                                                                                |
| Summer 1                         | Photo editing        | To recognise that digital images can be manipulated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | To use an application to change the whole of a digital image                                                                                                                                                                                                                                                                                                                                                                                                         |

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| Creating Media         |                     | <p>To recognise that digital images can be changed for different purposes</p> <p>To choose the most appropriate tool for a particular process</p> <p>To consider the impact changes made on the quality of the image</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>To use an application to change part of a digital image</p> <p>To use an application to add to the composition of a digital image</p> <p>To change the composition of a digital image by rotating and flipping</p> <p>To change the composition of a digital image by cropping</p> <p>To adjust colours of a digital image</p> <p>To apply filters to a digital image</p> <p>To apply effects to a digital image</p> <p>To select part of a digital image</p> <p>To use clone, copy and paste to change the composition of a digital image</p> <p>To use cloning to retouch a digital image</p> <p>To add text to a digital image</p> |
| Summer 2 Programming B | Repetition in games | <p>To relate what 'repeat' means</p> <p>To identify everyday tasks that include repetition as part of a sequence, e.g. brushing teeth, dance moves</p> <p>To explain that we can use a loop command in a program to repeat instructions</p> <p>To identify a loop within a program</p> <p>To identify patterns in a sequence</p> <p>To explain that in programming there are indefinite loops and count-controlled loops</p> <p>To explain that an indefinite loop will run until the program is stopped</p> <p>To explain that you can program a loop to stop after a specific number of times</p> <p>To identify patterns in a sequence, eg 'step 3 times' means the same as 'step, step, step'</p> <p>To justify when to use a loop and when not to</p> <p>To explain the importance of instruction order in a loop</p> <p>To recognise that not all tools enable more than one process to be run at once</p> | <p>To list an everyday task as a set of instructions including repetition</p> <p>To use an indefinite loop to produce a given outcome</p> <p>To use a count-controlled loop to produce a given outcome</p> <p>To plan a program that includes appropriate loops to produce a given outcome</p> <p>To recognise tools that enable more than one process to be run at the same time (concurrency)</p> <p>To create two or more sequences that run at the same time</p>                                                                                                                                                                     |