



# Year 5 - Year Group Overview Computing

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| Online Safety<br>(Using Project Evolve) | <p><b>Self-Image and Identity</b><br/>           I can explain how identity online can be copied, modified or altered.<br/>           I can demonstrate how to make responsible choices about having an online identity, depending on context.</p> <p><b>Online Relationships</b><br/>           I can give examples of technology-specific forms of communication (e.g. emojis, memes and GIFs).<br/>           I can explain that there are some people I communicate with online who may want to do me or my friends harm. I can recognise that this is not my/our fault.<br/>           I can describe some of the ways people may be involved in online communities and describe how they might collaborate constructively with others and make positive contributions. (e.g. gaming communities or social media groups).<br/>           I can explain how someone can get help if they are having problems and identify when to tell a trusted adult.<br/>           I can demonstrate how to support others (including those who are having difficulties) online.</p> <p><b>Online Reputation</b><br/>           I can search for information about an individual online and summarise the information found.<br/>           I can describe ways that information about anyone online can be used by others to make judgments about an individual and why these may be incorrect.</p> <p><b>Online Bullying</b><br/>           I can recognise online bullying can be different to bullying in the physical world and can describe some of those differences.<br/>           I can describe how what one person perceives as playful joking and teasing (including 'banter') might be experienced by others as bullying.<br/>           I can explain how anyone can get help if they are being bullied online and identify when to tell a trusted adult.<br/>           I can identify a range of ways to report concerns and access support both in school and at home about online bullying.<br/>           I can explain how to block abusive users.<br/>           I can describe the helpline services which can help people experiencing bullying, and how to access them (e.g. Childline or The Mix).</p> <p><b>Managing Online Information</b><br/>           I can explain the benefits and limitations of using different types of search technologies e.g. voice-activation search engine. I can explain how some technology can limit the information I am presented with.<br/>           I can explain what is meant by 'being sceptical'; I can give examples of when and why it is important to be 'sceptical'.<br/>           I can evaluate digital content and can explain how to make choices about what is trustworthy e.g. differentiating between adverts and search results.<br/>           I can explain key concepts including: information, reviews, fact, opinion, belief, validity, reliability and evidence.<br/>           I can identify ways the internet can draw us to information for different agendas, e.g. website notifications, pop-ups, targeted ads.</p> |

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|                                                  |                                              | <p>I can describe ways of identifying when online content has been commercially sponsored or boosted, (e.g. by commercial companies or by vloggers, content creators, influencers).</p> <p>I can explain what is meant by the term 'stereotype', how 'stereotypes' are amplified and reinforced online, and why accepting 'stereotypes' may influence how people think about others.</p> <p>I can describe how fake news may affect someone's emotions and behaviour, and explain why this may be harmful.</p> <p>I can explain what is meant by a 'hoax'. I can explain why someone would need to think carefully before they share.</p> <p><b>Health, Well-being and Lifestyle</b></p> <p>I can describe ways technology can affect health and well-being both positively (e.g. mindfulness apps) and negatively.</p> <p>I can describe some strategies, tips or advice to promote health and wellbeing with regards to technology.</p> <p>I recognise the benefits and risks of accessing information about health and well-being online and how we should balance this with talking to trusted adults and professionals.</p> <p>I can explain how and why some apps and games may request or take payment for additional content (e.g. in-app purchases, lootboxes) and explain the importance of seeking permission from a trusted adult before purchasing.</p> <p><b>Privacy and Security</b></p> <p>I can explain what a strong password is and demonstrate how to create one.</p> <p>I can explain how many free apps or services may read and share private information (e.g. friends, contacts, likes, images, videos, voice, messages, geolocation) with others.</p> <p>I can explain what app permissions are and can give some examples.</p> <p><b>Copyright and Ownership</b></p> <p>I can assess and justify when it is acceptable to use the work of others.</p> <p>I can give examples of content that is permitted to be reused and know how this content can be found online.</p> |
| Year 5                                           | <div>Declarative</div> <div>Procedural</div> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Autumn 1<br>Computing<br>Systems and<br>Networks | Systems and<br>searching                     | <p>To recognise that a system is a set of interconnected parts which work together</p> <p>To explain that computers can be connected to form IT systems</p> <p>To identify that data can be transferred between IT systems</p> <p>To recognise inputs, processes, and outputs in large IT systems</p> <p>To describe the role of a particular IT system in their lives</p> <p>To relate that search engines are examples of large IT systems</p> <p>To explain why search engines create indices, and that they are different for each search engine</p> <p>To explain the role of the web crawlers in creating an index</p> <p>To explain how search results are selected</p> <p>To explain that ranking orders search results to make them more useful</p> <p>To explain how ranking is determined by rules, and that different search engines use different rules</p> <p>To explain why the order of results is important and to whom</p> <p>To describe the input and output of a search engine</p> <p>To demonstrate that different search terms produce different results</p> <p>To evaluate the results of search terms</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

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|                                                 |                                        | <p>To explain how search engines make money by selling targeted advertising space</p> <p>To identify some limitations of search engines</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <p><b>Autumn 2</b><br/>Creating Media</p>       | <p>Video production</p>                | <p>To explain the feature of video as a visual media format</p> <p>To recognise which devices can and can't record video</p> <p>To explain the purpose of a storyboard</p> <p>To recognise that filming techniques can be used to create different effects</p> <p>To recognise the need to regularly review and reflect on a video project</p> <p>To explain the limitations of editing video on a recording device</p> <p>To identify that videos can be edited on a recording device or on a computer</p> <p>To identify videos can be improved through and reshooting or editing</p> <p>To recognise projects need to exported to be shared</p>                 | <p>To use different camera angles</p> <p>To use pan, tilt and zoom</p> <p>To identify features of a video recording device or application</p> <p>To combine filming techniques for a given purpose</p> <p>To determine what scenes will convey your idea</p> <p>To choose to reshoot a scene or improve later through editing</p> <p>To decide what changes I will make when editing</p> <p>To use split, trim and crop to edit a video</p> |
| <p><b>Spring 1</b><br/>Programming A</p>        | <p>Selection in physical computing</p> | <p>To explain that a condition can only be true or false</p> <p>To relate that a count-controlled loop contains a condition</p> <p>To compare a count-controlled loop with a condition-controlled loop</p> <p>To explain that a condition-controlled loop will stop when a condition is met</p> <p>To explain that when a condition is met, a loop will complete a cycle before it stops</p> <p>To explain that selection can be used to branch the flow of a program</p> <p>To explain that a look can be used to repeatedly check whether a condition has been met</p> <p>To explain the importance of instruction order in 'if...then...else...' statements</p> | <p>To create a condition-controlled loop</p> <p>To use a condition in an, 'if...then...' statement to start an action</p> <p>To use selection to switch the program flow in one of two ways</p> <p>To use a condition in an 'if...then...else...' statement to produce given outcomes</p>                                                                                                                                                   |
| <p><b>Spring 2</b><br/>Data and Information</p> | <p>Flat-file databases</p>             | <p>To explain that a computer program can be used to organise data</p> <p>To explain that tools can be used to select data to answer questions</p> <p>To outline how ordering data allows us to answer some questions</p> <p>To outline how operands can be used to filter data</p> <p>To outline how 'AND' and 'OR' can be used to refine data selection</p>                                                                                                                                                                                                                                                                                                      | <p>To choose different ways to view data</p> <p>To choose which attribute and value to search by to answer a given question (operands)</p> <p>To ask questions that need more than one attribute to answer</p> <p>To choose which attribute to sort data by to answer a given question</p> <p>To choose multiple criteria to search data to answer a given question (AND and OR)</p>                                                        |

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|                                           |                                        | <p>To explain that computer programs can be used to compare data visually</p> <p>To explain that we present information to communicate a message</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <p>To select an appropriate graph to visually compare data</p> <p>To choose suitable ways to present information to other people</p>                                                                                                                                                                                                                                                                                                        |
| <p><b>Summer 1</b><br/>Creating Media</p> | <p>Introduction to vector graphics</p> | <p>To identify that a vector drawing comprises separate objects</p> <p>To recognise that each object in a drawing is in its own layer</p> <p>To recognise that vector images can be scaled without impact on image quality</p> <p>To recognise that objects can be modified in groups</p> <p>To explain how alignment and size guides can help create a more consistent drawing</p> <p>To consider the impact of choices made</p>                                                                                                                                                                                                                                  | <p>To add an object to a vector drawing</p> <p>To select one object or multiple objects</p> <p>To delete objects</p> <p>To move objects between the layers of a drawing</p> <p>To group and ungroup selected objects</p> <p>To duplicate objects using copy and paste</p> <p>To modify objects</p> <p>To reposition objects</p> <p>To combine options to achieve a desired effect</p> <p>To create a vector drawing for a given purpose</p> |
| <p><b>Summer 2</b><br/>Programming B</p>  | <p>Selection in quizzes</p>            | <p>To explain that a condition can only be true or false</p> <p>To relate that a count-controlled loop contains a condition</p> <p>To compare a count-controlled loop with a condition-controlled loop</p> <p>To explain that a condition-controlled loop will stop when a condition is met</p> <p>To explain that when a condition is met, a loop will complete a cycle before it stops</p> <p>To explain that selection can be used to branch the flow of a program</p> <p>To explain that a loop can be used to repeatedly check whether a condition has been met</p> <p>To explain the importance of instruction order in 'if...then...else...' statements</p> | <p>To choose a condition to use in a program</p> <p>To create a condition-controlled loop</p> <p>To use a condition in an 'if...then...' statement to start an action</p> <p>To use selection to switch program flow</p> <p>To use 'if...then...else...' to switch program flow in one of two ways</p>                                                                                                                                      |