

# PROGRESSION OF DISCIPLINARY KNOWLEDGE – Computing

## Computer Science (problem solving, programming, logical thinking)

| FS2                                                                                                                                                                                                                                                 | Year 1                                                                                                                                                                                                                                                                            | Year 2                                                                                                                                                                                                     | Year 3                                                                                                                                                                                                                                                       | Year 4                                                                                                                                                                                                                        | Year 5                                                                                                                                                                                                                                                                                                           | Year 6                                                                                                                                                                                                                                                                  |
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| <p>No longer explicitly mentioned in EYFS Statutory Framework. However, we do provide opportunities for children to use technology during daily activities.</p> <p>Complete a simple program on electronic devices</p> <p>To make a beebot move</p> | <p>Create a simple algorithm to control a device or sprite</p> <p>Use sequences to make parts of an algorithm happen in order</p> <p>Plan an algorithm away from the device and then test it out</p> <p>Debug a simple program</p> <p>Predict the outcome of a simple program</p> | <p>Plan and create an algorithm to control a device or sprite</p> <p>Test out and debug an algorithm</p> <p>Predict possible outcomes of a given program</p> <p>Create multiple solutions to a problem</p> | <p>Create multiple solutions to a problem</p> <p>Use repeat loops to make programs more efficient</p> <p>Use forever loops to keep a program running</p> <p>Identify repetition in programs</p> <p>Use a range of events to trigger actions in a program</p> | <p>Create a simple drawing program</p> <p>Decompose a problem into smaller parts and create an algorithm for each part</p> <p>Debug the decomposed solution</p> <p>Use different events to make things happen in programs</p> | <p>Use selection in programs to change what happens when a condition is met</p> <p>Use selection in programs that have a user input</p> <p>Recognise selection in programs</p> <p>Debug programs involving selection</p> <p>Use variables in a program to keep score</p> <p>Recognise variables in a program</p> | <p>Use variables in a program to control a physical system</p> <p>Recognise variables in a program</p> <p>Create and use procedures in a program</p> <p>Debug programs using variables and procedures</p> <p>Plan out a program using abstraction and decomposition</p> |

## Information Technology

(searching, using programs and appropriate software)

| FS2                                                                                                                                                                                                                                                                                                                  | Year 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Year 2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Year 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Year 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Year 5                                                                                                                                                                                                                                                                                                                                                                                                             | Year 6                                                                                                                                                                                                                                                                                                                                                       |
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| <p>Talk about the technology used at home</p> <p>Create content such as drawing a picture on a screen</p> <p>Practise early mouse control</p> <p>To learn the function of some keys on a keyboard</p> <p>To understand devices can take photos</p> <p>Use ICT to interact with age appropriate computer software</p> | <p>Log on using a simple username and password</p> <p>Develop mouse skills – left, right, double click, targeting;</p> <p>Develop keyboard skills – simple typing and basic keys</p> <p>Open, use, save and access saved documents</p> <p>Highlight text and change appearance</p> <p>Capture images and insert an image to a document</p> <p>Sort objects into groups based on given criteria and label them on computer and unplugged</p> <p>Develop own criteria to sort, including a Venn diagram</p> <p>Create a pictogram</p> | <p>Continue developing keyboard and mouse skills, including using symbols and various punctuation</p> <p>Highlight text and change appearance using formatting tools</p> <p>Find and edit mistakes in a given word document, including the use of undo and redo</p> <p>Insert and move images, changing their size</p> <p>Identify an object using a branching database</p> <p>Create a simple branching database unplugged and on computer</p> <p>Identify and fix errors in a branching database</p> | <p>Insert an image, shape and/or WordArt</p> <p>Use text wrapping and other tools to alter images.</p> <p>Combine text and images to create a card</p> <p>Evaluate a piece of work according to criteria</p> <p>Explore databases using search and sorting criteria</p> <p>Navigate a database, using sort and search tools to find information and answer questions</p> <p>Create simple database – unplugged or on computer</p> <p>Add information to a database, identifying the kind of data to use</p> <p>Choose appropriate field names</p> | <p>Investigate an art package to find out what the different tools do</p> <p>Take photos and edit them</p> <p>Edit an inserted picture and use a range of visual effects</p> <p>Use crop, resize and layering tools, and revise ways of copying and pasting</p> <p>Create a storyboard plan</p> <p>Create a simple multi-media presentation that combines</p> <p>Insert and manipulate images and new pages</p> <p>Make links to new pages using hyperlinks</p> <p>Add narration and/or sound effects</p> | <p>Investigate a given program to find out what the different tools do</p> <p>Create a storyboard plan, making sure it is tailored to the audience and purpose</p> <p>Use given program to create a radio advert or podcast</p> <p>Use a microphone or tablet to record audio</p> <p>Add music and/or sound effects and add narration, layering for effect</p> <p>Edit, improve and evaluate the final outcome</p> | <p>Investigate a given program to find out what the different tools do</p> <p>Create a storyboard plan, making sure it is tailored to the audience</p> <p>Edit images and video in their movie and add text.</p> <p>Record audio and add narration</p> <p>Work collaboratively to produce presentations</p> <p>Edit, improve and evaluate the final film</p> |

## Digital Literacy

(find, use, communicate information online, safely)

| FS2                                                                                                                                                                                                                                                                                                                                                         | Year 1                                                                                                                                                                                                                                                                                                                                                                      | Year 2                                                                                                                                                                                        | Year 3                                                                                                                                                                                                                                                                                                | Year 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Year 5                                                                                                                                                                                                                                                                                                                                                                                                  | Year 6                                                                                                                                                                                                                                                                                                                                               |
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| <p>Note: skills in blue are taken from the Online Safety curriculum</p>                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                                                                                      |
| <p>Begin to understand which sites are safe to access at home and at school.</p> <p>Begin to understand that they must tell an adult if they see something they don't like when using a computer.</p> <p>Be able to access, understand and interact with a range of technologies.</p> <p>Understand the importance of a sensible amount of screen time.</p> | <p>Using a username and password to log</p> <p>Understand why we shouldn't share personal information</p> <p>Understand how to keep our personal information private and safe when we are online</p> <p>Understand that anybody can put things online</p> <p>Recognise the difference between truth and fiction</p> <p>Understand that things online are often not true</p> | <p>Explain why we need passwords</p> <p>Explain that what children see/hear online can upset them and what to do if this occurs</p> <p>Explain briefly the basics of what the internet is</p> | <p>Explain what target advertising is, including by age</p> <p>Explain why having a secure password is important</p> <p>Consider how to make passwords strong</p> <p>Explain in increasing detail what personal information is</p> <p>Explain how and why websites store a lot of our information</p> | <p>Explain what is meant by Copyright, including that it can be illegal to use other people's music, videos, images and words</p> <p>Explain what computer viruses are and how they can be sent via email, message and from files downloaded from the internet</p> <p>Explain reasons why the information presented online might be suspicious or untrue, including the motivation of the people and organisations presenting it</p> <p>Explain the need to question messages that you receive</p> <p>Explain how social media can limit the number of opposing views that we encounter.</p> | <p>Improve the quality of search results using knowledge of how search engines work</p> <p>Research the history and development of the network of the world wide web</p> <p>Use advanced search techniques to find information</p> <p>Conduct research online</p> <p>Evaluate information found online in terms of accuracy</p> <p>Explain that online information can be untrue and that there are</p> | <p>Analyse a range of web sites to judge what makes an effective webpage</p> <p>Investigate the features of Google pages</p> <p>Plan and design a web page about a class topic</p> <p>Create a webpage using a mix of text and images</p> <p>Add hyperlinks between pages and to other websites</p> <p>Collaborate effectively online, including</p> |

Become more familiar with the term 'Fake News'

ways of checking it

sending useful messages

Explain how we can make ourselves safer online using privacy settings and passwords

Explain how different groups have their own motivations, often based around commercial or ideological reasons

Explain why copyright exists

Explain how social media tends to limit the number of opposing views that we encounter

Explain how easy it is to edit images using computers, which can make it hard to tell the difference between truth and fake-news

Become more digitally literate by being able to analyse digital content

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|  |  |  |  |  |  | <p>Explain that not everything they read is true or without bias</p> <p>Discuss how bias can mislead readers, and that there are multiple perspectives to many stories</p> |
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