

# Knowledge and Skills Computing

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Projects</b>	<p><b>Modern Tales</b> What is a Computer? <b>Modern Tales</b> <b>My Online Life</b> <b>Mini Beasts</b></p>	<p><b>Online Buddies</b> <b>My Online Life</b> <b>Code a Story</b> <b>Storyland</b> <b>Heads up</b> <b>Maths Madness</b></p>	<p><b>Online Detectives</b> <b>My Online Life</b> <b>Dancing Robot</b> <b>Dinosaurs</b> <b>Keyboard Adventures</b> <b>T-Shirt Designer</b></p>	<p><b>Real or Fake</b> <b>My Online Life</b> <b>Hour of Code</b> <b>Rainforests</b> <b>Keyboard Challenges</b> <b>Wizard School</b></p>	<p><b>YouTuber</b> <b>My Online Life</b> <b>Girls v Boys STEM Challenge</b> <b>Making AR Games</b> <b>News Reporter and Podcaster</b> <b>Music Composer</b></p>	<p><b>Online Safety Dilemmas</b> <b>My Online Life</b> <b>VR Worlds</b> <b>Crossy Roads</b></p>
<b>Algorithms</b>	<ul style="list-style-type: none"> <li>Describe what actions I will need to do to make something happen and use computational language.</li> <li>Make choices to control simple models or simulations.</li> </ul>	<ul style="list-style-type: none"> <li>Recognise what algorithms are.</li> <li>Identify bugs and use the term debug in context.</li> <li>Predict the outcome of a sequence of blocks in scratch.</li> <li>Write and test simple programmes.</li> </ul>	<ul style="list-style-type: none"> <li>Create a basic game using hopscotch/ Tynker or scratch junior.</li> <li>Explain the process of game design.</li> <li>Use commands to improve programs.</li> <li>Create my own sprite in scratch.</li> <li>Test and debug a program and predict outcomes.</li> </ul>	<ul style="list-style-type: none"> <li>Use conditional statements such as if/then to control devices and achieve specific outcomes.</li> <li>Detect and correct errors in algorithms.</li> <li>Test programmes using models and simulations.</li> <li>Design and write programs that accomplish goals using variables for input/output.</li> </ul>	<ul style="list-style-type: none"> <li>Explain what augmented reality is.</li> <li>With support begin to produce algorithms by using logical and appropriate structures to create accurate and precise sequences.</li> <li>Predict what will happen when variables within a model are changed.</li> <li>Demonstrate knowledge and understanding of computer systems and hardware.</li> </ul>	<ul style="list-style-type: none"> <li>Produce algorithms independently using logical and appropriate structures to organise data.</li> <li>Understand the Impact of changing variables to achieve a required output.</li> <li>Execute command commands and functions with text-based programming.</li> <li>Evaluate the effectiveness and efficiency of an algorithm whilst continually testing the program.</li> </ul>
<b>Digital Literacy</b>	<ul style="list-style-type: none"> <li>Navigate apps on an iPad and carry out basic instructions.</li> <li>Scan a QR code.</li> <li>Combine text and image in a document.</li> <li>Take a good quality photograph and video on an iPad/digital camera.</li> <li>Use technology to create and present my ideas. E.g. I can create a photo story with audio.</li> <li>Use a search engine.</li> <li>Show an awareness of information in different formats.</li> </ul>	<ul style="list-style-type: none"> <li>Recognise common uses of Digital technology in and out of school.</li> <li>Save, share and organise digital work into folders.</li> <li>Create digital software using more than one app.</li> <li>Use technology to organise and present my ideas in different ways.</li> <li>Begin to use design and formatting to enhance digital work.</li> <li>Give examples of how to use technology to communicate.</li> <li>Use the internet to communicate.</li> <li>Aware of copyright and ownership of information.</li> </ul>	<ul style="list-style-type: none"> <li>Use software and search engines effectively to locate specific information.</li> <li>Effectively evaluate digital content.</li> <li>Begin to use editing and formatting techniques.</li> <li>Create a mixture of text, graphics and sound to share ideas about learning.</li> <li>Create diagrams and charts using simple programmes.</li> <li>Use a computer programme to design and create media.</li> <li>Edit and improve film including audio.</li> </ul>	<ul style="list-style-type: none"> <li>Demonstrate knowledge of computer hardware including input/output and storage devices.</li> <li>Improve the quality of my presentation using editing and formatting techniques.</li> <li>Use video techniques to create a film with green screen for special effects.</li> <li>Collaborate online to create digital content.</li> <li>Create short animation.</li> </ul>	<ul style="list-style-type: none"> <li>Use skills already developed to create content using unfamiliar technology.</li> <li>Understand basic elements of audio editing.</li> <li>Critically analyse the positive and negatives of being an online blogger.</li> <li>Describe how to check for and spot inaccurate data.</li> <li>Use technology to present work in a variety of formats editing and improving.</li> <li>Judge what sort of privacy settings might be relevant for reducing different risks.</li> <li>Recognise the need for accuracy when searching and selecting information, use other sources to verify information found.</li> </ul>	<ul style="list-style-type: none"> <li>Describe how information is transported on the internet.</li> <li>Discuss how search results and selected and ranked.</li> <li>Take account of accuracy and bias when searching for and selecting information.</li> <li>Explain what internet services are used for different purposes.</li> <li>Understand the term copyright and the reasons for it and consequences of ignoring it.</li> <li>Save and share documents in various formats.</li> <li>Use previously taught skills to develop and create content using unfamiliar online technology and apps.</li> <li>Produce graphs and charts to analyse data.</li> </ul>
<b>Online Safety</b>	<ul style="list-style-type: none"> <li>Recognise that I must keep personal information private. with three examples of personal information.</li> <li>Recognise the ways we use technology.</li> <li>Understand something online may upset and know where to find help if anything does.</li> <li>Communicate politely via the internet.</li> <li>Understand that once something it posted you lose control if it. (Online Reputation)</li> <li>Know the rules of using technology at home or in school.</li> </ul>	<ul style="list-style-type: none"> <li>Understand that I cannot trust everyone online.</li> <li>Use online services to communicate safely.</li> <li>Understand that once something is posted online you lose control of it.</li> <li>Give examples of online bullying behaviour.</li> <li>Know how to report online bullying behaviour.</li> <li>Explain what personal information is and understand the need for passwords to protect it.</li> <li>Identify false information.</li> </ul>	<ul style="list-style-type: none"> <li>Identify ways to keep safe using ICT.</li> <li>Recognise inappropriate online behaviours and show respect for individuals and copyright.</li> <li>Take appropriate measures to protect my own online identity.</li> <li>Explain what being a good digital citizen is.</li> <li>Understand the impact technology can have on my health, wellbeing and lifestyle.</li> </ul>	<ul style="list-style-type: none"> <li>Recognise social networking sites and social networking features built into other apps.</li> <li>Make judgements to stay safe when communicating with others.</li> <li>Identify potential risks when presented with scenarios.</li> <li>Understand how to recognise fake news and evaluate sources of information.</li> <li>Be critical in the analysis of data presented online.</li> <li>Describe strategies for safe and fun experiences in a range of online social environments.</li> <li>Understand people can see information I share online.</li> <li>Take measures to protect the privacy and security of my data.</li> <li>Understand the need for copyright and the consequences of ignoring it.</li> </ul>	<ul style="list-style-type: none"> <li>Be a good online citizen.</li> <li>Create a strong password and understand the real cost of some apps.</li> <li>Understand that judgements are made about people based on whats online about them.</li> <li>Make a positive contribution to my online community.</li> <li>Be aware of identity fraud and take measures to minimise this happening.</li> <li>Understand the impact technology can have on health, wellbeing and lifestyle.</li> </ul>	<ul style="list-style-type: none"> <li>Discuss scenarios involving online risk. State the source of information found online and act as a role model for younger children.</li> <li>Find report and flag buttons in commonly used sites and name sources for help (e.g Childline, Cybermentors, CEOPS)</li> <li>Understand how to keep data private and secure.</li> <li>Understand the impact technology can have on health, wellbeing and lifestyle.</li> <li>Evaluate the accuracy of online information.</li> <li>Create a positive online reputation and understand the consequences of over-sharing.</li> <li>Aware of the need for positive online relationships.</li> </ul>