



Year 6			
Subject	Knowledge	Skills	Key Vocabulary
<p><b>Computational Thinking</b> Design, write and debug programs that accomplish specific goals, including controlling or simulating physical systems; solve problems by decomposing them into smaller parts</p> <p>Use sequence, selection, and repetition in programs; work with variables and various forms of input and output</p> <p>Use logical reasoning to explain how some simple algorithms work and to detect and correct errors in algorithms and programs</p> <p><b>Computer Hardware and Digital Literacy</b> Understand computer networks including the internet; how they can provide multiple services, such as the world wide web; and the opportunities they offer for communication and collaboration</p> <p>Use search technologies effectively, appreciate how results are selected and ranked, and be discerning in evaluating digital content</p> <p>Select, use and combine a variety of software (including internet services) on a range of digital devices to design and create a range of programs, systems and content that accomplish given goals, including collecting, analysing, evaluating and presenting data and information</p> <p>Use technology safely, respectfully and responsibly; recognise acceptable/unacceptable behaviour; identify a range of ways to report concerns about content and contact.</p>	<p><b>E Safety</b></p> <ul style="list-style-type: none"> <li>• I protect my password and other personal information.</li> <li>• I can explain the consequences of sharing too much about myself online.</li> <li>• I support my friends to protect themselves and make good choices online, including reporting concerns to an adult.</li> <li>• I can explain the consequences of spending too much time online or on a game.</li> <li>• I can explain the consequences to myself and others of not communicating kindly and respectfully.</li> </ul> <p>I protect my computer or device from harm on the Internet.</p> <p><b>Programming</b></p> <ul style="list-style-type: none"> <li>• I can deconstruct a problem into smaller steps, recognising similarities to solutions used before.</li> <li>• I can explain and program each of the steps in my algorithm.</li> <li>• I can evaluate the effectiveness and efficiency of my algorithm while I continually test the programming of that algorithm.</li> <li>• I can recognise when I need to use a variable to achieve a required output.</li> <li>• I can use a variable and operators to stop a program.</li> <li>• I can use different inputs (including sensors) to control a device or onscreen action and predict what will happen.</li> </ul> <p>I can use logical reasoning to detect and correct errors in a algorithms and programs.</p> <p><b>Handling Data</b></p> <ul style="list-style-type: none"> <li>• I can plan the process needed to investigate the world around me.</li> <li>• I can select the most effective tool to collect data for my investigation.</li> <li>• I can check the data I collect for accuracy and plausibility.</li> <li>• I can interpret the data I collect.</li> <li>• I can present the data I collect in an appropriate way.</li> <li>• I use the skills I have developed to interrogate a database.</li> </ul> <p><b>Multimedia</b></p> <ul style="list-style-type: none"> <li>• I can talk about audience, atmosphere and structure when planning a particular outcome.</li> <li>• I can confidently identify the potential of unfamiliar technology to increase my creativity.</li> <li>• I can combine a range of media, recognising the contribution of each to achieve a particular outcome.</li> <li>• I can tell you why I select a particular online tool for a specific purpose.</li> <li>• I can be digitally discerning when evaluating the effectiveness of my own work and the work of others.</li> </ul> <p><b>Technology in Our Lives</b></p> <ul style="list-style-type: none"> <li>• I can tell you the Internet services I need to use for different purposes.</li> <li>• I can describe how information is transported on the Internet.</li> <li>• I can select an appropriate tool to communicate and</li> </ul>	<p><b>Computer Science</b></p> <p><b>Hardware</b></p> <ul style="list-style-type: none"> <li>• Learning about the history of computers and how they have evolved over time</li> <li>• Using the understanding of historic computers to design a computer of the future</li> <li>• Learning how barcodes, QR codes and RFID work</li> <li>• Learning about some of the methods which cause data corruption</li> </ul> <p><b>Networks and Data Representation</b></p> <ul style="list-style-type: none"> <li>• Understanding that computer networks provide multiple services</li> </ul> <p><b>Computational Thinking</b></p> <p>Decomposing a program into an algorithm</p> <ul style="list-style-type: none"> <li>• Using past experiences to help solve new problems</li> <li>• Writing increasingly complex algorithms for a purpose</li> </ul> <p><b>Programming</b></p> <p>Debugging quickly and effectively to make a program more efficient</p> <ul style="list-style-type: none"> <li>• Remixing existing code to explore a problem</li> <li>• Using and adapting nested loops</li> <li>• Programming using the language Python</li> <li>• Changing a program to personalise it</li> <li>• Evaluating code to understand its</li> </ul>	



<p><b>Information technology</b></p>	<p>collaborate online.</p> <ul style="list-style-type: none"> <li>• I can talk about the way search results are selected and ranked.</li> <li>• I can check the reliability of a website.</li> <li>• I can tell you about copyright and acknowledge the sources of information that I find online.</li> <li>• I know that websites can use my data to make money and target their advertising</li> </ul>	<p>purpose</p> <ul style="list-style-type: none"> <li>• Predicting code and adapting it to a chosen purpose</li> <li>• Altering a website's code to create changes</li> </ul> <p><b>Information technology</b></p> <p><b>Using Software</b> Using logical thinking to explore software independently, iterating ideas and testing continuously</p> <ul style="list-style-type: none"> <li>• Using search and word processing skills to create a presentation</li> <li>• Planning, recording and editing a radio play</li> <li>• Creating and editing sound recordings for a specific purpose</li> <li>• Creating and editing videos, adding multiple elements: music, voiceover, sound, text and transitions to create a video advert</li> <li>• Using design software TinkerCAD to design a product</li> <li>• Creating a website with embedded links and multiple pages</li> </ul> <p><b>Using Email and Internet</b> Understanding how search engines work</p> <p><b>Using Data</b></p> <ul style="list-style-type: none"> <li>• Understanding how barcodes, QR codes and RFID work</li> <li>• Gathering and analysing data in real time</li> <li>• Creating formulas and sorting data within spreadsheets</li> </ul> <p><b>Digital Literacy</b></p> <p><b>Wider Use of technology</b></p> <ul style="list-style-type: none"> <li>• Learning about the</li> </ul>	
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